LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

SPANISH LAKE

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED ANNUALLY

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Spanish Lake was a natural lake that dated to pre-1700s. It was created as a result of a Mississippi meander through the Bayou Teche area thousands of years ago. Parts of the water bottom were claimed through Spanish Land Grants prior to the 1800s. Historical information indicates that Louis Charles de Blanc de St. Denis, b. April 29, 1753, d. April 6, 1826, had an active plantation on the shores of Spanish Lake called the Lady of the Lake. He built the Keystone canal from Spanish Lake to the Bayou Teche in the early 1800's to power his sugar cane grinding mill before the advent of steam powered mills. The sale of the bottom of this canal to the present riparian landowners was authorized by Wildlife and Fisheries as the result of legislation passed in 2007.

The GLO State Meander Line was established in 1843-1844 which defined the lake's boundaries and established state sovereignty over the lake regardless of whether or not there is water present in the lake bottom.

1899

The lake was mentioned in a U. S. Fish Commission publication in 1899. (Evermann, B.W. 1899. Report on investigations by the U.S. Fish Commission in Mississippi, Louisiana, and Texas, in 1897. Rept. U.S. Fish Comm. 24:287-310.) Barton Warren Evermann, Ph. D., Ichthyologist of the United States Fish Commission, was accompanied by Mr. Fred M. Chamberlain and Mr. H. R. Center, from the division of inquiry of the U. S. Fish Commission. The report states that there were only artificial connections to the Bayou Teche and no inlets with all water supplied entirely by rains. This condition exists today. He also states that the water was quite warm in the summer and was full of aquatic vegetation. He noted that fish occurring in the lake were large-mouthed black bass (sic), or "green trout", reaching a weight of 6 to 10 pounds, sac-a-lait (sic), goggle-eye, bream, sunfish, barfish (*Roccus chrysops*), pike (*Lucius vermiculatus*), gar, grindle (bowfin), goujon (flathead catfish), blue cat, gaspergou (freshwater drum), and buffalo.

1940 TO 1960

Mr. Leo M. Odom, Chief Engineer for the State of Louisiana Department of Public Works, wrote in a letter dated June 28, 1946, that "The present lake occupies a much smaller area than was the case when the State was admitted to the Union. We have completed the field work of establishing the meander line as it was run out by the Surveyor-General in 1843-4, but I believe that the boundary should be determined by establishing the elevation of mean high water as of 1812 by means of geological and botanical investigations, as has been done on several other lakes where the boundary had been meandered by the U. S. Land Surveyors, but did not appear to have been accurately defined."
Mr. Odom reported that Mr. C. A. Bell, District Engineer of the Department of Public Works, collected

some data in an investigation of the project. It is unclear what project Mr. Odom is referring to in his reply to Mr. James L. Helm of New Iberia, Louisiana. The data Mr. Bell collected reported the existing lake to be 8400 feet in average diameter, with an area in the middle of the lake approximately 1000 feet in diameter. This middle area was reported to have an average depth of 4 feet of water and 4 feet of soft mud. The remainder of the lake averaged 2 feet in depth of water with 5.5 feet of soft mud. Those soundings were made when the lake was 10.3 feet above Mean Gulf Level (M.G.L.).

Mr. Bell went on to report that the land around the lake within the boundaries of the original lake was floating turf and was about 12.00 feet M.G.L. elevation. Mr. Bell estimated that if all of the mud was dredged from the lake it would require the excavation of 11,000,000 cubic yards of material. He surmised that this spoil could be used to build a strip around the lake 1000 feet wide to a height of 5.5 feet. He estimated that approximately 500 acres would be reclaimed with this activity. Mr. Bell then noted that in order to bring a hydraulic dredge into the lake would necessitate the dredging of a channel from the Bayou Teche to the lake from above the Keystone Lock. This channel would have to be filled after completion of the work with about 160,000 cubic yards of material involved in making the channel. He stated that considerable cost would be involved in cutting through and repairing a state highway. Mr. Bell confirmed that the state owned all of the land between the meander of the high water contour and the present lake except for portions of Sections 16 and 17, T. 11 S., R. 6 E., which were part of an approved Spanish land grant.

The Daily Iberian reported on March 24, 1953 that Representative Fred V. Decuir announced a luncheon meeting would be held on March 27 with the director of Wildlife and Fisheries, L. D. Young, giving an address on the reclamation and rebuilding of Spanish Lake to its once magnificent splendor. It was reported later in April that the Director and the commission were discussing funding for Spanish Lake with Rep. Decuir.

This meeting resulted in Mr. Young requesting an investigation into the Spanish Lake conditions by department biologists. In a letter dated October 20, 1953, Harry Schafer, Jr., Biologist, outlined the 1946 Public Works report to Mr. George Moore, Chief, Fish and Game Division. Included was a document entitled "Report on Spanish Lake." The date and author of this report was not cited but it appears that it was written in 1953 at the request of Mr. Schafer and based on facts from the 1947 investigation by Mr. C. A. Bell. This document stated that the lake contained 1400 acres by superficial measure and that the elevation was about 12 feet M. G. L. along the shore of the lake which was slightly higher than the marsh associated with the lake.

This report included the facts that Spanish Lake was a unique geological formation. It was originally the Mississippi River bed that came down the upper Vermillion River bed and Bayou Tortue through the lake, north and west of New Iberia, and through to Grand Marais creating the Bayou Cypremont and Bayou Sale ridges before reaching the Gulf of Mexico. It is assumed that when Bayou Teche became the main channel of the Mississippi, the western Spanish Lake channel was abandoned and isolated with its water level several feet above the swamp level in the Bayou Tortue area and above the water level of the Bayou Teche. At this time, it was reported that there was a sufficient watershed to maintain Spanish Lake and take care of evaporation.

At this time the condition of Spanish Lake was described as having a depth of between 18 inches and 5 feet. Water hyacinth was reported to cover a large portion of the lake and when it died it mixed with the silt brought into the lake with the runoff of adjacent agricultural lands. The lake was described as a dead sea because of the lack of an outlet and the silt had nowhere to escape except for over the banks which were uniformly at an elevation of 12 feet M. G. L.

To improve conditions the Public Works author suggested that the depth of the lake needed to be increased. The two alternatives he proposed were to either put a levee around the lake or to dig it out. He surmised that to build a levee and depend on runoff from the adjacent higher lands to fill the lake to approximately 16 or 17 feet M. G. L. would result in a relatively smaller watershed and the loss to cultivation of all the land between elevations 12 and 16 or 17 M. G. L. The alternative method of digging the lake out with a suction dredge would necessitate the excavation of close to 5,000 cubic yards per acre to increase the depth to 3 feet. In this lake of 1400 acres, that would mean 7,000,000 cubic yards of excavation material. In 1953 it was estimated that the cost of this alternative would be about $350,000.

Mr. Schafer added that, in his opinion, the project cost would not be feasible at that time to put Spanish Lake back into a productive recreational fishing opportunity. He further stated that without the removal of the organic material on the bottom of the lake, the fish reproduction would be virtually impossible because the eggs would sink into the muck and there would be no successful hatches of nesting fish. He stated that further fish population surveys were needed to determine the status of fish in the lake.

Apparently, the levee alternative was initiated in 1954 with the construction of a ring levee around approximately 1240 acres of peat bog adjacent to the natural levee ridge deposited by the Teche-Mississippi River. In May of 1954, the Daily Iberian reported that bids for work on another unit of the Spanish Lake improvement project were due on May 17, 1954. The work involved 8,900 cubic yards of excavation, 14,000 cubic yards of levee embankment, and 249,000 cubic yards of peat moss stripping. Problems with wave generated erosion of the ring levee delayed completion of the project until 1957.

1960 TO 1970

In May, 1960, in a letter from Lloyd E. Posey, Jr., Fisheries Biologist, to Mr. Harry Schafer, Jr., Supervisor Freshwater & Sport Fisheries Section, Mr. Posey described a request from Jim Ledbetter, New Iberia, and Mr. Gaston Mestayer, President, Spanish Lake Game and Fish Commission, to assist them in developing a fisheries management plan for Spanish Lake. Mr. Posey described work being carried out at the time as efforts to spray water hyacinth that covered about 60 percent of the lake, acquiring rights-of-ways for the construction of roads and ramps to allow public access, and raising the water level some three feet above its present stage. After examining the lake, Mr. Posey recommended a rotenone sample be taken and a management program developed after the sample results were analyzed and interpreted.

In a letter dated September 9, 1960, a description of efforts of Mr. Posey and the fish management project crew to conduct fish sampling in Spanish Lake was sent to Mr. Schafer. Mr. Posey informed Mr. Schafer that attempts to launch into Spanish Lake were thwarted by the presence of alligator weed and water hyacinth mats extending far out into the lake leaving an open area of water approximately 50 acres in size. This attempt to sample Spanish Lake was cancelled for this time. Mr. Schafer sent a memorandum dated September 18, 1961, to John D. Newsome, Chief, Fish and Game Division that included a copy of the Posey letter and informed him that any management plan would have to be following the successful control of existing water hyacinth.

Mr. Posey wrote a memorandum dated August 29, 1961 to Mr. Schafer and included a brief management plan that did not contain much detail due to indecision on the part of the Game and Fish Commission regarding direction to take in developing a program for Spanish Lake.

Mr. Posey, in his tentative management plan for Spanish Lake, reported the lake to be 1240 surface acres in size with an elevation of 13.0 ft. Mean Sea Level (MSL). He indicated that a canal six to eighteen feet deep and approximately fifty feet wide was located around the inside of the ring levee.

Water was pumped from the Joe Daigre canal into the lake via a 24 inch pipe. About one third of the lake was timbered with mostly willow. Water hyacinth and alligator weed infested large areas of the lake.

The brief management plan was based mainly on rotenone sampling conducted in May of 1961. Three acres were sampled and showed an average of 15.54 lbs. per acre. Bowfin made up 8.5 lbs. per acre of the total sample. Mr. Posey indicated that this was low poundage but was to be expected since Spanish Lake had never been properly stocked with fish and was not considered to be ideal fish habitat. In light of the rotenone sampling results it was recommended that the existing population be killed completely and the lake restocked with the proper number of fish. It should be noted that there were no largemouth bass included in the sampling results.

Recommendations for the lake included the following:

1. Draining the lake as far as possible to allow clearing of timber and vegetation.
2. All fish remaining in low areas were to be killed with rotenone to remove undesirable fish.
3. The lake should be re-flooded in the fall to reduce the amount of fish eggs and larvae being pumped into the lake.
4. The lake should be restocked with the proper number of fish after the lake is re-flooded.
5. The lake level should be fluctuated annually once it has been restocked in order to keep the population in balance and prevent stunted growth of forage fish and increase the growth rates of predator fish. The level should be lowered in June each year and re-flooded beginning in October. An added benefit of annual drawdowns would be the control of aquatic plant growth.

Harry Schafer, Supervisor, Fisheries Section sent a memorandum to Kenneth Lantz, Fishery Biologist, Fisheries Section on November 6, 1963, and informed him that Jim Ledbetter requested a long range fishery management plan for Spanish Lake. There is no record that this management plan was completed.

In a letter dated October 31, 1967, Kenneth Lantz, Fisheries Biologist sent information concerning fish stocking records for Spanish Lake to Representative Patrick T. Caffery, Representative, Iberia Parish. Mr. Lantz outlined the stocking history showing that the lake was restocked with bluegill, crappie and bass in 1964 following complete fish eradication in 1963. He reported that, in the spring of 1965 and 1966, there were reports of limits of fish being caught in the lake but that these reports had declined in 1967. Mr. Lantz reported that lowering of water levels in the lake for levee repairs may have negatively influenced fishing success. He stated that no fisheries samples had been taken in the lake since restocking in 1964 and that he would request rotenone sampling for the lake in 1968 along with electrofishing samples in the spring of 1968 to check bass and crappie spawning success. Mr. Lantz reported that Mr. Thurman Morgan, Department of Public Works, advised him that the lake would be returned to pool stage in December, 1967, and had been delayed by problems with the pump.

<u>1970 TO 1980</u>

James Bellot wrote a letter to Clark Hoffpauir, Director, Wildlife and Fisheries Commission, on February 17, 1970 stating his concerns with the state of fishing at Spanish Lake. This prompted a memorandum from Sam C. Murray, Executive Assistant, Wildlife and Fisheries Commission, to Kenneth Lantz, Fisheries Biologist, Wildlife and Fisheries, asking him to contact Mr. Bellot and discuss conditions at the lake. Mr. Lantz responded on March 3, 1970 with a summary of fish samples and stocking records for Spanish Lake. He informed Mr. Bellot that restocking was completed in the spring of 1964 of 750,000 bluegill, 50,000 largemouth bass and 31,000 black crappies. By his estimate the stocking was more than adequate 1,240 acre lake. He also relayed that since 1966, Spanish Lake had good catches of largemouth bass, crappie, bluegill and channel catfish. He assumed that the channel

catfish came from a few that survived the attempt at total eradication in 1963. He also noted that yellow bass were being caught and those fish probably were pumped into the lake from the Joe Daigre canal during the winter of 1967. Lantz reported rotenone sampling results from June of 1969 with a high of 291.5 pounds of fish per acre consisting of 139.0 pounds of harvestable game fish per acre. Largemouth bass results were 47.6 pounds per acre, black crappie results were 33.1, and bluegill results were 23.7. All of these figures represented optimal fishable populations of game fish. In addition yellow bass results were 31.4 pounds per acre.

On March 16, 1970, Mr. Lantz sent to Mr. Ernest Freyou, Secretary-Treasurer, Iberia Parish Police Jury, basically the same results mentioned above in the February letter to Mr. Bellot.

On June 23, 1972, Mr. Lantz sent a letter to Mr. Gus Touchet, Spanish Lake Commission, advising him of a release of 5,500 largemouth bass fingerlings into the lake. Mr. Lantz stated the reason for the stocking was due to the low reproduction of bass in the lake shown in fish population samples of May, 1972. Mr. Lantz reported finding indications of poor bass spawning success in the spring of 1971 and 1972.

The Spanish Lake Commission consisting of Mr. Hebert, Mr. Langlinais, Mr. Bodin, Mr. Pedigo, Mr. White and Mr. Gus Touchet, sent a letter in December, 1972, containing a number of resolutions. The following resolutions are of particular interest:

1. A resolution to the Attorney General of the state of Louisiana asking him to assist the Commission in acquiring a right of way of passing and easement between the property owners of Charles Tenny and Albain Segura Estate was passed and carried.
2. A resolution requesting the Department of Public Works to prepare a cost study estimate of repairing the rest of the levee, the pumping station, the walkway, picnic area, pavilion, bathroom facilities and all others was passed unanimously.
3. Gordie White issued a permit to catch trash fish with gill net to Ronald Kennedy from November 15, 1972 to January 15, 1973.
4. Resolution to the Wildlife and Fisheries Commission to take a survey of the fish population and carry out recommendations with particular emphasis on potential striped bass stockings was passed unanimously.

Kenneth C. Smith, Chief, Fish Division, replied to the commission on January 9, 1973, stating that the division would be happy to conduct surveys of the fish populations in the lake. He also addressed the request for striped bass stocking and turned down the request for the reason that budget problems limited their effort to stock striped bass to attempting to establish reproducing populations in D'Arbonne and Toledo Bend lakes.

In response to a letter from Mr. White to the then Secretary of the Department, Mr. Burton Angelle on July 26, 1973, Mr. Smith sent basically the same answer again on March 9, 1973, to Mr. Gordie White, now chairman of the Spanish Lake Game and Fish Commission.

On July 26, 1973, correspondence between Mr. Kenneth C. Smith, Chief, Fisheries Division, and Mr. Kenneth Lantz, Fisheries Biologist, Fish Division, delivered another management plan to Mr. Gordie White, Chairman, Spanish Lake Game and Fish Commission. Mr. Lantz's management plan was mainly prefaced upon rotenone samples taken in the lake in 1969, 1972 and 1973. These samples showed available size largemouth bass, black crappie and bluegill pounds per acre to decline with each succeeding year of sampling. The pounds per acre for these three game fish species went from 47.6, 33.1 and 24.7 pounds per acre in 1969 for largemouth bass, black crappie and bluegill, respectively, to

0.0, 0.9 and 0.95 pounds per acre in 1972 and then to 0.0, 6.9 and 2.7 in 1973. Mr. Lantz reported that the samples revealed that very little spawning success had occurred since 1969 for largemouth bass and bluegill. The high occurrence of bullhead catfish fingerlings were not being kept under control by largemouth bass. The reason for the rapid decline in standing crop numbers of bass and bluegill was due to the failure of reproduction of these two species. Lack of suitable substrate was cited as the reason for this failure of spawning success.

Mr. Lantz's recommendations were to drawdown the lake to confine fish in the borrow canal adjacent to the levee. Apparently there was a need for levee repair work again at the lake. He suggested that the public be given the opportunity to remove fish from the canal during the lowered state. He suggested that the remaining fish be eradicated with rotenone before October of 1973 with the public again encouraged taking advantage of all fish in distress during the eradication. Spawning substrate such as oyster shell should be placed as a reef adjacent to and on the lake side of the borrow canal. As soon as the fish were eradicated, the process of refilling the lake should begin. He suggested that all water pumped into the lake be filtered with some sort of screening process to prevent the introduction of fish into the lake. Restocking should be with bluegill, redear sunfish and channel catfish in the winter of 1973 with largemouth bass and crappie stocked in the spring of 1974.

James Byers, Fisheries Biologist, Department of Wildlife and Fisheries sent a letter to Mr. Earnest Freyou, Secretary-Treasurer, Iberia Parish Police Jury, on December 1, 1978, enclosing a plan for renovating Spanish Lake. He stated that the plans should be coordinated with the Louisiana Office of Public Works for levee and pump repairs. Mr. Byers cited the rapid deterioration of fish values from samples taken in 1972, 1973 and 1975. The 1975 samples indicated mostly channel catfish in the intermediate and fingerling size classes. He echoed previous biologists' concerns of very little spawning of largemouth bass and bluegill. He stated that, in 1976, 50,000 largemouth bass were stocked into Spanish Lake in an attempt to reduce the bullhead catfish population in the lake. The results of that stocking were minimal.

Mr. Byers recommendations were made in view of the poor fish population structure of Spanish Lake and the need for repairs to the levee, repairs to the control structure that was vandalized and remained partially open without hope of being closed plus and repairs to the pump. He made the following recommendations:

1. The control structure to be opened completely to allow the lake to dry. He mentioned the benefits of drying the lake bottom to oxidize the organic material of the bottom to reduce the biological oxygen demand which should improve water quality upon re-flooding.
2. Artificial spawning sites should be created on the lake bottom with sand and reef shell.
3. Eradication of all fish prior to refilling the lake would be necessary.
4. Refilling the lake should be timed so that no rough fish eggs would be reintroduced into the lake and water quality would not be poor from the effects on sugar cane grinding on the Bayou Teche.
5. The lake should be restocked with channel catfish, sunfish, crappie and largemouth bass.

<u>1980 TO 1990</u>

Problems with the deteriorating levee have seen more than one major repair with an associated drawdown undertaken to maintain the present size of the lake. In 1982, the lake was drawn down again to repair a breach in the ring levee. In September 1982, the levee was breached and a barge cover was used in an emergency procedure to prevent a total drawdown and loss of the lake. A controlled drawdown was implemented in May 1984 and levee repairs and lake renovation was finished in October 1985. The lake was refilled by pumping from the Joe Daigre canal assisted by heavy rains from Hurricane Juan.

The lake was restocked in January 1986 with 60,000 bluegill and redear sunfish. Florida strain largemouth bass were stocked along with channel catfish in 1986, also. Monitoring of the stocking success was accomplished by electrofishing on an annual basis beginning in March 1987. Carp and shad were the predominant species initially until 1990 when shad were absent from sampling results. The numbers of gamefish declined continuously and in 1990 were totally absent. This was attributed to a large fish kill that occurred in late 1989 as a result of a hard freeze that caused the entire lake to freeze over for several days.

A letter dated October 12, 1989, from Bruce Davidson, District VI Fisheries Supervisor, to Gary Tilyou, Assistant Dingell-Johnson Coordinator, Wildlife and Fisheries. Mr. Davidson related that the lake vegetation survey found in 1988 found a heavy plankton bloom with no submersed or floating vegetation. He reported that the levee was eroding and attributed the erosion to both boat wakes and wind generated waves. His remedy would be to dredge a channel into the lake from the boat ramp to remove boat traffic adjacent to the ring levee to decrease the boat wake erosion. The wind generated erosion would be reduced with a breakwater levee in the lake following the ring levee around the lake.

1990 TO 2008

There was a request from the Iberia Parish Council and Craig Romero, Iberia Parish Council President, on February 14, 1990, for the department to evaluate Spanish Lake fish populations following fish kills related to a freeze that occurred in 1988 and to consider restocking if the population was found to be lacking. This apparently prompted the writing of the Spanish Lake Breakwater Levee and Restocking Plan document in April, 1990.

This document delineated most of the history outlined here from 1954 to 1986. Mr. Bruce Davidson, District VI Inland Fisheries Supervisor, listed several problems with Spanish Lake.

1. The decline in desirable fish populations.
2. Severe erosion of the ring levee was taking place in spite of continuous efforts by the Iberia Parish Council to reinforce the ring levee with waste concrete used as riprap.
3. Periodic fish kills were occurring as a result of severe freezes due to the shallow water conditions existing in the lake.
4. Large populations of rough fish existed in the lake.
5. Turbid water conditions resulting from the wave generated re-suspension of bottom sediments and overabundance of plankton. The plankton was identified as filamentous algae through microscopic testing of water samples on February 12, 1990.

Mr. Davidson's recommendations for the management plan were as follows:

1. Construction of breakwater levees to control erosion of the ring levee.
2. Construction of interior breakwater levees to control wave action as well as provide edge and deep water refuge for future drawdowns of at least 4 feet.
3. Dredging and access channel into the lake from the boat ramp to alleviate boat wake erosion of the ring levee.

Mr. Craig Romero, Iberia Parish President, requested that the lake be drawn down as the Parish Council had the equipment, operator and financing to complete the project and to operate the pump to refill the lake upon completion of the project. Iberia Parish then requested bids from private contractors. A meeting of the Spanish Lake Advisory Council was held on August 16, 1990 to open bids for the Spanish Lake Breakwater Levees and Access Channel project. The bids ranged from $292,000 to $549,000.

On April 3, 1991, Bruce Davidson met with Iberia Parish Council President Craig Romero, Parish Administrative Assistant Roy Pontiff, Assistant Parish Public Works Director Leroy Landry, Parish Recreation Department Director Curtis Landry and Consulting Engineer Simon Freyou at the Spanish Lake Boat ramp to discuss federal funding for rehabilitation of Spanish Lake.

The total project of the breakwater levees and access channel was found to exceed available funds. The highest priority was determined to be the repair and protection of the ring levee. A Capital Outlay Request was then initiated for the 1991-1992 budget year. The Louisiana Department of Transportation and Development also filed a Capital Outlay Request for funds to repair the levee road and improve the back slope of the levee.

In kind services reported to count as matching funds at this meeting were the construction of the access channel from the boat ramp, boat ramp repairs including extending the boat ramp 20 feet and repairing rotten planks on the boat dock. It was reported, also, that Iberia Parish was in the process of hiring a welder to make repairs to the Overflow Structure and would be adding riprap to the ring levee as necessary. The parish was in the process of dredging canals approximately 8 feet deep with intermittent deep holes and using the spoil to build breakwater levees to protect the ring levee.

Mr. Davidson noted that "contrary to what was originally believed, the organic peat is only approximately 2 feet thick with a layer of yellowish-gray clay beneath it." He said that the spoil material was of very good quality and provided firm levees with little sloughing. Mr. Romero inquired at this time as to who would provide the fuel to refill the lake and if there would be any fish available for restocking when filled.

A program narrative was written by Bruce Davidson entitled "Spanish Lake Access Channel, Repairs to the Boat Launching Ramp, Repairs to the Overflow Structure and Riprap Levee Protection" and was approved as federal project F-71 by Cleophus Cook on May 2, 1991 in a letter to M. A. Kell McInnis, III, Acting Secretary, Wildlife and Fisheries. The amount approved was for $164,500 with the federal share being $123,375 and the state share $41,125. The job objectives were listed as follows:

1. To provide additional rip-rap protection for the levees.
2. To extend the concrete pavement of the boat ramp further into the water.
3. To repair the overflow funnel and gate to prevent undue leaks.
4. To provide an access channel between the boat ramp and the main area of the lake.

Capital outlay funds were requested and entitled "Interior Wavewash Breakwater Levees for Spanish Lake". The total amount in the request was $2,000,000. Included in the request was Bruce Davidson's "Spanish Lake (Iberia-St. Martin Parishes) Breakwater Levee and Restocking Action Plan" **(SEE LINK TO DOCUMENT 22 ABOVE)** and the environmental assessment document entitled "Proposal for Constructing Wavewash Breakwater Levees For Spanish Lake, Iberia Parish, La."

The capital outlay request document included in the comments/explanation portion of the request the following statement.

"The Iberia Parish Government has in the past and will continue to perform the following:

1) Monthly grading of the roadway along the levee crown.
2) Annual resurfacing of the roadway along the levee crown.
3) Continual repairs and additions to the riprap levee slope protection.
4) Repairs to the boat ramp and pump/overflow structure.
5) Cleanup, trash disposal, grass maintenance and access gate operation."

A pre-bid conference was scheduled for potential contractors for the Spanish Lake Capital Outlay

Project was held on February 8, 1995, at the Spanish Lake boat ramp. Simultaneously, Representative Elias "Bo" Ackal drafted legislation to reorganize the Spanish Lake Commission with 5 members from Iberia Parish and 2 from St. Martin Parish. A newspaper article from the Lafayette Daily Advertiser dated October 25, 1995, **(SEE PICTURE 1, APPENDIX III)** accompanies a picture of a dragline operating in Spanish Lake and has the headline that reports that restoration was ahead of schedule. Iberia Parish President is quoted as saying that "the commission he formed to design a usage plan for the lake has suspended its meeting schedule." The Commission had met several times to decide on rules and regulations but had abruptly suspended its meetings. Langlinais said that the commissioners weren't sure how much authority they had in deciding laws governing the lake. He is quoted in the article to say "Basically, the commissioners want final say on what happens and I'm not sure Iberia Parish wants to assume that responsibility and the financial aspects that go along with it." Langlinais stated that he was concerned that the state legislature would cut future funding for lake maintenance if the parish took full control of the lake from the Department of Wildlife and Fisheries.

According to another article in the Lafayette Daily Advertiser on January 31, 1996, **(SEE PIC 2, APPENDIX III)** Simon Freyou, the project engineer, stated that refilling the lake would begin in late March and it should take four to six weeks to completely refill the lake before Wildlife and Fisheries began restocking efforts.

Problems with the original pump forced the pumping of the lake to be contracted out to M. Matt Durand, Inc. on September 20, 1996, for the sum of $60,250.00 for pumping 1,200,000,000 gallons of water from the Joe Daigre canal connected to Bayou Tortue. On November 22, 1996 a document signed by Matt Durand was filed with Facility Planning and Control stating that the lake was completely filled with water. On January 7, 1997, a change order was filed with the Louisiana Facility Planning and Control to reduce the pumping quantity by forty-eight percent from 1,200,000,000 gallons to 622,147,000 gallons reducing the cost of the original contract.

There was no record of the lake being restocked in a balanced ratio of predator to prey fish. Anecdotal evidence revealed that local bass fishermen were taking bass from other area water bodies and stocking them into the lake during and after the refilling of the lake. The lake was stocked in May, 1997 with Florida strain largemouth bass and bluegills were stocked in October, 1998. There were very successful harvests of crappie in the spring of 1998 and 1999 and bass were available in great abundance. The lake had almost total coverage of young willow trees that eventually disappeared after about 2 or 3 years. During a drought that occurred in the years of 1998 through 2000, water levels were reduced to about 18 inches below pool stage due to the leaking overflow structure and gamefish were becoming harder to find. Though contrary to LDWF recommendations, the Spanish Lake Game and Fish Commission arranged for Iberia Parish to bring a portable pump to the lake in June, 2000. Water was pumped into the lake from the Joe Daigre canal. The timing of this pumping could not have been worse. Literature reports common carp may start spawning at 14.5 degrees Celsius (C) but are most active between 18.5 and 20 degrees C. Inland fisheries data for Spanish Lake show that the earliest temperatures for carp spawning occur as early as January in some years and reach optimal temperatures for spawning in March and April. It can be assumed from these recorded temperatures in the lake that spawning had already occurred in the Joe Daigre canal and Bayou Tortue two months prior to this pumping event and there may have been carp fingerlings available to go through a twenty-four inch pump at this time. Many carp were observed at this pumping event stacked up in front of the discharge pipe into the lake. They were so thick that anglers had little difficulty snagging them with bare hooks.

Electrofishing results in the fall of 1998 revealed large numbers of largemouth bass. The total catch per effort (CPE) was 122 bass per hour. This number consisted of all size classes of bass mainly from 3 to 8 inches total length and from 10 to 16 inches in total length. Age and growth data from this fall sample

showed age 0 fish to be from 4.3 to 10.1 inches in total length at capture with an average of 6.8 inches. Age 1 fish ranged from 10.8 to 17.1 inches total length at capture with an average of 14.0 inches. This was exceedingly fast growth rates and reflected the phenomenon normally called "the new reservoir effect".

The fall electrofishing samples CPE in 1999 recorded only 44.8 bass per hour and the size classes were again between 3 and 16 inches total length. Growth rates were similar to those of 1998. Spring samples in 2001 revealed that the total CPE had dropped to 23.1 and have never been as high again to the lowest in the 2008 spring CPE of 8.7.

The 2001 spring samples already showed a lack of juvenile YOY largemouth bass as size classes were mostly 10 inches total length and larger. Succeeding years had almost no fish under 13 inches total length in spite of annual stocking rates of about 124,000 Florida bass fingerlings. It was apparent that almost no successful spawning was taking place and the few individual fingerlings that were captured were from the stocking efforts. The increase annually of the percent of Florida genetic influence lends evidence to this theory.

Genetic results from 1998 and 1999 showed only 21% Florida gene influence. This is evidence that the remaining population of fish were not completely killed when the lake was drained or the unauthorized stocking by local bass anglers had been successful. The Florida gene influence increased steadily throughout the years and was 45% in 2001, 55% in 2006 and 89% in 2007. The results of stocking were appearing in the genetic sampling but not in the numbers of bass available for harvest in the lake.

Crappie populations in the lake burgeoned from the refilling in 1997 to 2001. Fall electrofishing CPE were 52 fish per hour and 72 fish per hour respectively for white and black crappie. Since 2001, the electrofishing sampling results have steadily declined. Fall electrofishing in 2007 indicated a CPE of 0.8 fish per hour for white crappie and 0.0 fish per hour for black crappie. Beginning in 2003, no crappies were captured that measured less than 12 inches in total length. It is evident that the lack of successful spawning has prevented these two species from sustaining a viable population. One crappie was captured in the 2005/2006 gill net samples. No crappies were captured in either 2006/2007 sampling or 2007/2008 sampling.

Carp and buffalo were observed more often in electrofishing sampling than other species of fish in the lake since 2001. Some of the highest CPE for gill net sampling in all years since 2001 were for carp and buffalo. Blue catfish were stocked in 1998 followed by stockings of both blue and channel catfish were in 2004. These fish, although present in gill net sampling for all years following 1998, increased in size and number through the 2007/2008 sampling year. Anecdotal evidence indicates that the most successful fishing currently at Spanish Lake is for catfish. There are some anglers visiting the lake that are willing to catch and keep a few carp and there is also a small contingent of visitors using dip nets to catch grass shrimp along the banks.

Despite an investment of over 2 million dollars in repairs to the levee, boat ramp, and access channel and the construction of breakwater levees, the water control structure was not repaired. Unfortunately, the poor condition of the drawdown pipe and overflow structure undermined the potential value of the other work. As soon as pool stage was achieved, the control structure began to leak. The leaking structure and the drought conditions that existed in 1998, 1999 and 2000 contributed to a continuous low water level.

Inspections in the year 2000 revealed numerous holes in the pipe and the overflow pipe. In 2001, funding was secured from the Department of Natural Resources Atchafalaya Basin Program to effect

repairs on the pipe and drawdown structure. Enough money was secured to build a coffer dam using coated steel z-piles to prevent draining the lake completely and then replace to the old pipe through the levee. The drawdown gate was attached to a pipe through the z-piles and overflow was accomplished with windows in the z-piles. The coffer dam with overflow windows set to present pool stage of 11.0 ft. NGVD as reported by Rick Dugas, Dam Inspector with the Department of Transportation and Development. Soon after this fix, it was noticed by fisheries district personnel that the water was running out of the lake again. Erosion of the levee around the ends of the dam walls permits water to flow through to the drain pipe underneath the levee. When rainfall is occurring at a high enough rate, the lake remains full and overflowing with overflow from the coffer dam. During times of drought, the lake will drain through the leaking structure resulting in water levels approximately 12 inches below pool. Although this doesn't seem like much of a decrease in pool stage, it is critical in a lake with as much shallow water as Spanish Lake. High summer temperatures combined with shallow water affect the lake's fish population in a negative way. The soft sediment bottom of the lake combined with the large population of rough fish is contributing to the absence of a sustainable population of gamefish in the Spanish Lake. It is imperative that these three problems be corrected. The alternative is the same cycle of decline that has occurred since the ring levee was built in 1954.

PHYSICAL DESCRIPTION OF LAKE

Size
1,260 acres (See attachment.)

Shoreline length
Approx. 7 miles

Average depth
4.81 feet

Maximum depth
6.75 feet

Natural seasonal water fluctuation
Not known as the drawdown structure has always leaked. It is assumed that there should be no fluctuation other than evapotranspiration.

Water shed
The watershed of Spanish Lake is reported to be 2.5-1 acres or nearly direct rainfall.
The lake is (90%) surrounded by a ring levee. At this time, the only means of increasing the water level in the lake is through pumping surface water and/or rainfall.

Pool stage
11.0 feet MSL is reported in 2002 by the Louisiana Department of transportation and Development (DOTD) in its report, Louisiana Dam Safety Program State Project No.: 750-99-0056, Inspection Report for Spanish Lake. (See Attachment)
The 1947 report by C. A. Bell reported the lake elevation to be 10.3 Mean Gulf Level (M.G.L.) at the time of his soundings to discover the depth of the lake and that the elevation of the surrounding banks were floating turf with an elevation of 12.0 feet M.G.L.
Mr. Harry Schafer, Wildlife and Fisheries Biologist, reported in 1953 that the elevation of the lake shore was about 12.0 feet M.G.L.

Parish/s located
Iberia / Upper St. Martin

Border waters
The border waters with which there is no connection to the lake except through the drawdown structure are Joe Daigre Canal to Bayou Tortue to the Bayou Teche.

Drawdown description
No firm description of the drawdown rate with or without rainfall or depending on the water level of the Bayou Teche has been found in any historical literature.

Spillway
Gate size - 24 inch, through coffer dam at levee
Number of gates - 1
Condition – Newly rebuilt 2001, Leaks around contact points with levee. Photographs of the leaking structure were forwarded to Inland Fisheries Administrators on January 26, 2007.
The Spanish Lake Game and Fish Commission was contacted by e-mail including attachment of photographs showing the extent of the leak on February 28, 2007. The Chairman, Bobby Bodin responded that they were aware of the leak and had the Iberia Parish Public Works Director visit the site with him and promised repairs to the structure. This e-mail was forwarded to Charlie Dugas, Inland Fisheries Program Manager, and Tim Morrison, Inland Fisheries Federal Aid Coordinator, on March 2, 2007.
Repairs were undertaken with creosote timbers driven into the levee to form wing walls at the z-piles' contact points on the levee. Dirt was repacked at the timber wings to fill the holes that had eroded down about 4 feet around the end of the coffer dam. The timber wings were not butted to the z-piles and, consequently, the water again eroded around the contact points of the levee. This is how the control structure exists today.

(PHOTOGRAPHS OF LEAK - SEE APPENDIX III)
Flow rate – Variable flow rate dependent on water level

Sluiceway
Sluiceway location – Directly behind drawdown structure, draining through the Joe Daigre canal into Bayou Tortue and then to Bayou Teche.
Sluiceway opening - 60 inch coal tar coated corrugated pipe through levee
Condition – New in 2001
Flow rate - Variable flow rate dependent on water level

Who controls
DOTD District 3
William K. Fontenot, District Engineer Administrator
BillFontenot@dotd.la.gov
Phone – (337) 262-6100
Physical Address -428 Hugh Wallis Road
Lafayette, La. 70508
Mailing Address - P.O. Box 3648
Lafayette, La. 70502-3648

LAKE AUTHORITY

The owner of the Spanish Lake water bottom is the State of Louisiana. Management authority belongs to the Louisiana Department of Wildlife & Fisheries.

Association

Spanish Lake State Game and Fishing Commission

Members, Contact information

a. David Tate– Chairman
317 Bernard Dr.
New Iberia, La. 70560
337-321-0156

b. Greta Green– Vice-Chairman
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g. Ann Tate – Secretary
317 Bernard Dr.
New Iberia, La. 70560
337-321-0156

Authorization

Title 36

RS 36:610

§610. Transfer of agencies to Department of Wildlife and Fisheries

C. Notwithstanding any provisions of R.S. 56:801 to the contrary, the game and fish commissions created by the following Acts, as amended, are hereby abolished, and their powers, duties, functions, and responsibilities are transferred to the secretary of the Department of Wildlife and

Fisheries and hereafter shall be exercised and performed as provided in Part IV of Chapter 22 of this Title, and the game and fish preserves created by the following Acts, as amended, are hereby placed within the Department of Wildlife and Fisheries and shall exercise and perform their powers, duties, functions, and responsibilities as provided for agencies transferred in accordance with the provisions of Part II of Chapter 22 of this Title. Any parish or parishes, by formal resolution of the governing authority of each parish affected, pursuant to R.S. 56:721 et seq. may appoint a game and fish commission which may exercise those powers, duties, and functions provided in R.S. 56:721 et seq. in relation to the game and fish preserves for which commissions are hereby abolished.

(9) Spanish Lake State Game and Fish Commission (Act No. 261 of the 1940 Regular Session, as amended)

RS 36:851

Chapter 22, Part II

§851. Transfer; merger and consolidation of functions

A. The powers, duties, functions, responsibilities, programs, and operations as vested by the constitution and laws of this state, of each of the agencies transferred by the provisions of R.S. 36:209(B), R.S. 36:209(I), R.S. 36:259(C), R.S. 36:409(D) and (O), R.S. 36:478(J), and R.S. 36:610(D), upon and after the date of each such transfer shall be exercised by and be under the administration and control of the secretary of the department to which each is transferred, except for those functions of each which are required to be performed and administered by the undersecretary of each department, as heretofore provided for each by this Title.

B. The secretary of each department shall have full authority, to the extent not inconsistent with this Title, to assign powers, duties, functions, responsibilities, programs, and operations of any agency transferred in accordance with the provisions of this Part to any other agency so transferred or to an office within the department, or may determine that any or all of them shall be exercised in such other manner, not inconsistent with law, as he shall decide. The powers, duties, and functions hereafter to be exercised and performed by each of the agencies transferred in accordance with the provisions of this Part and by each office in the department shall be determined by the secretary, in accordance with the general functions of each office as set forth in the applicable provisions of this Title for each office.

Acts 1976, No. 513, §1. Amended by Acts 1977, No. 83, §1, eff. June 22, 1977; Acts 1981, No. 858, §2, eff. Jan. 1, 1982; Acts 1988, No. 785, §1; Acts 1997, No. 273, §2.

Title 41

CHAPTER 10. LEASES OF PUBLIC LANDS
PART I. LEASES FOR GENERAL PURPOSES

RS 41:1211

§1211. Lessor defined

For the purposes of this Part, the term "lessor" shall refer to and include the Register of the State Land Office, the commissioner of conservation, and any and all other branches, departments or agencies of the state, or any school district, levee district, drainage district municipal or parochial subdivision of this state, or any penal or charitable institution, or state university or college, or other unit or institution, deriving its authority and powers from the sovereignty of the state.

RS 41:1222

§1222. Surface leases on state lands

A. The Registrar of the State Land Office, acting for and on behalf of the state of Louisiana, may execute surface leases for any of the purposes enumerated in R.S. 41:1212 of not more than two acres on any lands, including water bottoms, under his jurisdiction. All such leases shall be for a cash consideration and under such terms and conditions as the Registrar of the State Land Office deems to be most beneficial to the state of Louisiana. Leases of this type shall be granted only when the individual seeking to acquire such a lease has, prior to January 1, 1985, in good faith, constructed permanent improvements in the amount of not less than ten thousand dollars on said lands and is the owner or lessee of said improvements.

B. Each lease granted under the authority of this Section shall be for a term not to exceed ten years. The secretary shall have the right to renew any such lease in accordance with the provisions of R.S. 41:1217.

C. Any lease granted under authority of this section shall be subordinate to any lease hereafter made of the lands for oil, gas or other mineral development, and any lease granted shall be subject to termination at any time if it is determined that the land covered by the lease is required for use by the state.

Added by Acts 1966, No. 196, §1. Amended by Acts 1967, No. 33, §5; Acts 1983, No. 460, §1; Acts 2001, No. 1061, §1.

CHAPTER 14. STATE WATER BOTTOM MANAGEMENT
RS 41:1701

§1701. Declaration of policy; public trust

The beds and bottoms of all navigable waters and the banks or shores of bays, arms of the sea, the Gulf of Mexico, and navigable lakes belong to the state of Louisiana, and the policy of this state is hereby declared to be that these lands and water bottoms, hereinafter referred to as "public lands", shall be protected, administered, and conserved to best ensure full public navigation, fishery, recreation, and other interests. Unregulated encroachments upon these properties may result in injury and interference with the public use and enjoyment and may create hazards to the health, safety, and welfare of the citizens of this state. To provide for the orderly protection and management of these state-owned properties and serve the best interests of all citizens, the lands and water bottoms, except those excluded and exempted and as otherwise provided by this Chapter or as otherwise provided by law, shall be under the management of the Department of Natural Resources, hereinafter referred to as the "department". The State Land Office, hereinafter referred to as the "office", shall be responsible for the control, permitting, and leasing of encroachments upon public lands, in accordance with this Chapter and the laws of Louisiana and the United States.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1701.1. State Land Office; powers, duties, functions, and responsibilities

A. The duties of the State Land Office shall be under the administration of a public lands administrator and a deputy public lands administrator who shall be responsible for performing the functions set forth in this Chapter unless otherwise specified.

B. The State Land Office shall be composed of four sections as follows:

(1) The administrative section, which shall be responsible for the administration, control, and operation of the functions and programs of the office.

(2) The land and water bottom section, which shall be responsible for management of the programs within the statutory responsibility and authority of the State Land Office relating to the beds and bottoms of navigable waters and the banks or shores of the bays, arms of the sea, the Gulf of Mexico, and navigable lakes which belong to the state of Louisiana, and those over which the state has

acquired the right to navigate by conventional agreement or otherwise, which shall be protected, administered, and conserved to best ensure full public navigation, fishery, recreation, and other interests.

(3) The historical records section, which shall be responsible for the maintaining of records and plats of state and federal land sold; maintaining a state land and building inventory system; and maintaining tax adjudication documents.

(4) The titles and surveys section, which shall be responsible for the determination of titles and surveys pertaining to state lands and water bottoms using the records of the office and its field assets in such determinations.

C. Subject to the approval of the commissioner of administration, the governor, the attorney general, the Department of Wildlife and Fisheries, and the Department of Natural Resources, the State Land Office shall develop and promulgate a comprehensive state master plan for the administration of state lands and water bottoms and shall ensure that all public lands and water bottoms are protected, administered, and conserved in a manner consistent with the constitution.

D. The State Land Office shall identify all public lands and water bottoms within the state and develop and maintain a current master list of those lands and water bottoms. All state agencies, including but not limited to Department of Culture, Recreation and Tourism, the Department of Natural Resources, the Department of Wildlife and Fisheries, the Department of Transportation and Development, the Louisiana Geological Survey, the state's colleges and universities, all levee boards, drainage boards, parish governing authorities, and any districts created under the jurisdiction of levee boards, drainage boards, or parish governing authorities, shall cooperate with the State Land Office in developing the master list.

E. The State Land Office is hereby authorized to conduct meetings, hold public hearings, and appoint advisory committees to assist the office in its duties. In accordance with law, the office may accept gifts, donations, and bequests which may assist the office in the performance of its duties.

F. The State Land Office shall have the authority to develop and promulgate necessary rules and regulations in accordance with the Administrative Procedure Act.

G. None of the duties and responsibilities or organization of the State Land Office as provided in this Section shall supersede or modify the authority granted to any other state agency.

Acts 2001, No. 919, §1.

§1703. Permits and licenses for encroachments other than reclamation projects

A. Encroachments, other than those provided in Section 1702, may be permitted and licensed by the department under the provisions of this Chapter.

B. As provided herein, the State Land Office, with the aid of the Department of Natural Resources, the Department of Wildlife and Fisheries, Department of Transportation and Development, and the attorney general, shall adopt regulations to implement this Chapter, including the granting and revoking of permits, leases or licenses, processing of applications, establishing fee schedules, collecting of fees or revenues for all manner of encroachments, and shall create an overall and comprehensive plan for the orderly development and preservation of state lands so as to ensure maximum benefit and use, all in accordance with the law. The office shall maintain a current inventory of state lands and a depository in which shall be recorded and preserved all records, surveys, plats, applications, permits, leases, licenses, and other evidence pertaining to the trust lands, their description, disposition, and encroachments thereon.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1704. Definitions

As used in this Chapter:

(1) "Encroachment" means any construction, or improvement, obstacle, fill, or material which is placed upon or maintained upon state lands.

(2) "Pier" means any structure extending channel ward from the shore or bank, built upon pilings with water on both sides, with or without a sunshade or boathouse, built or maintained for the purpose of providing a berthing or mooring place for watercraft or for loading or unloading cargo or passengers onto or from watercraft or for fishing.

(3) "Wharf" means any structure built upon pilings extending along the shore and generally connected with the bank or shore along its length, with or without a sunshade or boathouse, built or maintained for the purpose of providing a berthing or mooring place for watercraft or for loading or unloading cargo or passengers onto or from watercraft or for fishing.

(4) "Material" means rock, gravel, sand, shell, silt, or other inorganic substances used to fill any state lands of this state.

(5) "Deposit" means the action of placing or moving materials by artificial means, over state lands which results in or adds to a landfill, whether contained within a bulkhead or not.

(6) "Person" shall mean any individual, partnership, corporation, organization, or entity not including political subdivisions or state agencies.

(7) "Structure" means any encroachment upon state lands, other than those which are specified as the subject matter of a particular class of permit, which is permanently attached to the public lands by pilings, or other means, including, but not limited to storage docks, houses, camps, warehouses, residences, bulkheads not proximate to the shore or bank, business establishments, dams, bridges, impoundment structures, or similar works.

(8) "Noncommercial" means built or maintained by either private citizens or nonprofit corporations for the purpose of recreation and enjoyment and not for revenue production, except for nonprofit corporations, or realizing profit.

(9) "Commercial" means built or operated for any purpose where revenue is produced or profit realized.

(10) "Landfill" means the direct or induced raising or elevating of any navigable water bottom by deposit to the extent that newly emerging land results, not covered at mean low water or navigable rivers and streams or mean high water on other state properties.

(11) "Lessor" means the state of Louisiana, through the department.

(12) "Owner" means the actual owner of record.

(13) "Bank stabilization works" means concrete, rock, masonry, rip-rap, or similar materials used to cover existing banks or shorelines or bulkheads located above the mean low water line, all in acres subject to erosion, to combat the same.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978.

§1705. Application of Chapter; exemptions

This Chapter shall not apply to:

(1) Piers, wharves, structures, or other improvements within the jurisdiction of any deep-water port commission of this state, including but not restricted to the authority to grant permits to construct, create, alter, improve, extend, or maintain any wharf, pier, dock, structure, or other improvement, and the granting of any permit for any of such purposes shall be and remain in the deep-water port commissions as to any such activity heretofore or hereafter performed or for which permit heretofore was or hereafter is sought.

(2) Levees or other public flood control structures;

(3) Temporary extensions to existing encroachment added for a period not to exceed six months, if required by low or high water, unless unduly interfering with public navigation or fishery;

(4) Ordinary repairs and maintenance to existing encroachments;

(5) Duck blinds, rafts, floats or buoys, unless unduly interfering with public navigation or fishery;

(6) Shore or bank stabilization works;

(7) Operations upon navigable waters by the United States Army Corps of Engineers in exercise of their authority over navigation;

(8) Regulation of oyster beds, fish, and other wildlife, or collection of payment for fill materials exercised by the Department of Wildlife and Fisheries;

(9) Any temporary emergency flood control measure;

(10) Any highway related project undertaken by authority of the Department of Transportation and Development;

(11) Any activity by a state mineral lessee in the development and operation of the lease;

(12) The establishment and maintenance of any encroachment by the state agency in the discharge of its lawful duties or functions;

(13) Pipeline rights-of-way granted over state lands by the estate; or

(14) Commercial and noncommercial wharves and piers extending over public lands less than fifty linear feet whose surface area does not exceed one hundred fifty square feet, unless part of another encroachment or system or unduly interfering with public interests, navigation, or fishery.

(15) Projects of the Terrebonne Parish governing authority utilizing the area of Bayou Terrebonne between Terrebonne High School and the Intracoastal Waterway for a public purpose.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978. Amended by Acts 1981, No. 1, §1, eff. May 18, 1981; Acts 1997, No. 222, §1.

§1706. Classes of permits

A. Any person desiring to construct, create, alter, improve, extend, or maintain any wharf, pier, dock, bulkhead, landfill, structure, or other encroachment shall obtain a permit from the office, prior to commencing any work, under the procedures established herein. Permits shall be classified as follows:

(1) Class A Permits: Permits for reclamation of lands lost through erosion under R.S. 41:1702(D)(1).

(2) Class B Permits: Permits to construct bulkheads or flood protection structures in proximity to the bank or shore, excluding bank stabilization works and projects to facilitate the development, design engineering, implementation, operation, maintenance, or repair of coastal or barrier island restoration projects by the Department of Natural Resources under R.S. 49:214.1 et seq. or other applicable law or projects for the Atchafalaya Basin Program.

(3) Class C Permits: Permits to construct commercial wharves and piers.

(4) Class D Permits: Permits to construct structures other than wharves or piers, excluding projects to facilitate the development, design engineering, implementation, operation, maintenance or repair of coastal or barrier island restoration projects by the Department of Natural Resources under R.S. 49:214.1 et seq. or other applicable law or projects for the Atchafalaya Basin Program.

(5) Class E Permits: Permits to construct landfills upon non-eroded state lands.

B. All permits shall be subject to the regulations and procedures established herein and adopted by the department or the office. The requirements and procedures for applicants established in R.S. 41:1702(D)(1) to implement reclamation of eroded lands shall govern reclamation projects thereunder; the regulations and procedures established by other Sections of this Chapter shall only apply to Class A

Permits when no conflict exists with R.S. 41:1702. Noncommercial piers and wharves shall not be subject to permit requirements.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1707. Permits; applications; documentation and processing

A. Any person or entity desiring to commence operations upon any encroachment as provided in R.S. 41:1706 shall notify the office in writing of his intent to apply for a permit, and the nature thereof. Upon receipt of the applicant's letter, the office shall forward the appropriate application forms to the applicant with a copy of the regulations governing that class permit. The office shall forward a copy of the letter of intent to the local governing authority of the parish or parishes within which the encroachment is planned.

B. Applications shall be completed in triplicate and each copy shall be accompanied by a certified deed of ownership of the lands contiguous to public lands, or if the applicant is not the owner, then a certified copy of the deed or other instrument under which the true owner holds title plus written permission from the owner to carry out the project. If a certified copy of a deed translative of title does not exist, then the office upon good cause shown, may accept some other reasonable evidence of ownership of the adjacent property to be benefited by the encroachment or other lawful proof of applicant's authority to use the same. Where an encroachment is not attached to or does not benefit property contiguous to these lands, the applicant shall submit certified proof of the authority under which he is constructing the encroachment.

C. All permit applications shall be accompanied by clear and legible copies of maps, plans, details and other documentation and correspondence submitted to the United States Army Corps of Engineers and other state, local, or federal agencies which have jurisdiction over the proposed work. Whenever possible, permits shall be granted for minor bulkheads, piers, wharves or structures, upon satisfaction of documentation requirements of the United States Army Corps of Engineers to avoid duplication of efforts by the applicant. Where a permit application contemplates any form of landfill or reclamation, or involves a substantial encroachment upon state lands, the applicant shall provide a plat of survey as contemplated for land reclamation permits under Section 1702, and any applicable engineering or architectural plans. In all cases, an applicant shall submit additional information, prior to issuance of a permit, where the secretary or attorney general requires the same for consideration of the permit application or resolution of legal issues.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1708. Leases to maintain encroachments; exceptions

The office may grant leases for the continuing maintenance of all lawful encroachments upon state lands upon such terms and conditions established as most beneficial to both the state and lessee, in accordance with law. Owners of noncommercial piers and wharves, Class A and Class B encroachments shall not be subject to lease requirements. Any exempt wharf or pier described hereinabove shall be subject to lease if it is determined to unduly interfere with public navigation and fishery or is part of another encroachment or system of encroachments.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1709. Terms and conditions of leases

A. Owners or occupiers of encroachments, constructed pursuant to a permit issued hereunder, and those existing upon state lands as of July 13, 1978, which are otherwise lawful except for a permit, shall apply to the office for a lease of the encroachment. No permit shall be required for projects to

facilitate the development, design, engineering, implementation, operation, maintenance, or repair of coastal or barrier island restoration projects by the Department of Natural Resources under R.S. 49:214.1 et seq. or other applicable law or projects for the Atchafalaya Basin Program. Where the best interests of the state and applicant will be served, a noncompetitive lease shall be granted upon the conditions contained in this Chapter. The term "noncompetitive lease" as used in this Chapter shall not refer to any proposed use for which the lease is granted. All such leases shall be for a cash consideration and such terms and other considerations as deemed most beneficial to the state of Louisiana, considering the type and extent of the encroachment. The cash and other considerations for the leases and renewals shall be based upon linear feet, area, values of the improvement and the public land occupied, degree of impairment to the public interest, and benefit to the owner, be it income, profit or otherwise, that is derived by use of the public lands. The cash and considerations for leases of minor commercial wharves and piers shall be a nominal fee, sufficient to cover the costs of processing and administration by the office. If it is determined that the considerations paid to the state are not reasonable, fair, and adequate value of the lands occupied as of the date of renewal, additional cash, or other considerations may be required of the lessee at that time in order that the state be justly compensated for use of the public lands. All leases shall be reviewed and approved by the attorney general prior to issuance or renewal.

B. Each lease granted under the authority of this Section shall be for a term not to exceed five years. The office shall have the right to renew any such lease but not in excess of ten successive periods under the same or revised terms, but in no case shall any single renewal of such a lease be for a period exceeding five years, nor shall the total number of years of which the land is leased under the same lease exceed fifty. At the end of the fifty-year maximum period, the lessee may apply for a new lease as provided herein.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978. H.C.R. No. 56, 1989 R.S; Acts 2001, No. 919, §1.

§1711. Leases and permits; general conditions

A. All permits and leases for encroachments shall be conditioned upon the applicant's or lessee's holding the state and office harmless for all acts or omissions of any person or agent in the construction and maintenance of the encroachment though the lease or permit subsequently expires or is revoked; constructing, creating, and maintaining the encroachment in a state of repair or upkeep and condition has to reasonably conform to criteria and standards adopted to protect the public interest. Permits issued pursuant to these provisions shall be effective for a period not to exceed two years from the date of issuance and shall thereupon expire; all work remaining or any additional work may be completed only upon application in the manner provided by this Chapter. No permit or lease shall be issued unless first approved by the governing authority of the parish in which the encroachment is located, the attorney general, and such other parochial or state agencies, as may have jurisdiction in the premises.

B. Any lease or permit granted pursuant to the provisions of this Chapter shall be subordinate to prior servitudes, permits, and leases and to any future oil, gas, and mineral lease and shall be subject to the laws of the state concerning wildlife and to the rules, regulations, and orders authorized by such laws. Without consent of the lessee, or permittee, the state or agency having authority may grant servitudes and other leases affecting the property which do not interfere unreasonably and permanently with the use of the property by the lessee.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1712. Leases and permits, grant or denial; title

A. Where encroachment, activity, or lease thereof would or does obstruct or hinder the navigability of any waters of the state, impose undue or unreasonable restrains on the state or public rights which have vested pursuant to Louisiana Law, or result in injury to or interference with the public interest or usage, to that extent the application shall be denied, or the encroachment limited.

B. In no instance shall a permit or lease be construed to confirm title or rights with respect to the encroachment relative to other claimants of the riparian property or as between riparian owners. Nothing in this Chapter, the regulations adopted thereunder, nor permits or leases issued shall be construed to divest the state of ownership or any right, title, interest, or power in or over any state lands, except as authorized by Section 3 of Article IX of the Louisiana Constitution of 1974.

C. The office shall adopt timetables and provide an opportunity for hearing, after reasonable notice, for any person aggrieved by a decision to issue or deny a permit or lease, as provided by law, and may establish criteria and standards of construction and maintenance for all types of encroachments, to best protect the public interest. The office may adopt boundaries or lines upon any state lands, not exceeding bounds established by the United States Army Corps of Engineers beyond which no encroachment shall be placed, all in accordance with law.

D. When permit or lease applications involve projects over which the United States Army Corps of Engineers, the Department of Natural Resources, or any other federal or state agency asserts jurisdiction, and such governmental agencies have, by public notice or regulations, established timetables for receipt of objections, public hearings, or other proceedings, the office, to least inconvenience the applicant and prevent multiple hearings, shall adopt and conform to such timetables or evidentiary requirements and shall attempt to coordinate any public hearing with such agencies whenever feasible. When the United States Army Corps of Engineers or other interested agencies do not assert jurisdiction over a given project, thirty days from date of published notice by the applicant shall be allowed for receipt of objections in writing by the office.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1713. Leases and permits, cause for cancellation or revocation

A. Abandonment of an encroachment, or noncompliance with the law, this Chapter, or regulations and standards adopted thereunder, shall result in the revocation or cancellation of any permit or lease unless the persons responsible remedy the problem or violation within thirty days of written or published notice, by the department or office, as applicable, specifying the violation. The period for compliance may be extended for additional thirty-day periods up to one hundred twenty days total, upon a showing by the persons responsible of inability to comply by reason of extensive work required. Where force majeure prevents the persons responsible from complying with the departments or the office's demand, the thirty-day corrective period shall be suspended until such date when work becomes reasonably possible.

B. If the violation is such that no remedy is possible, or an immediate and substantial hazard to public health, safety and welfare exists, or the persons responsible refuse or fail to correct the problem, within the thirty days provided, any permit or lease for the encroachments involved shall be cancelled and revoked. Any construction or maintenance of an encroachment not in substantial compliance with this Chapter shall be an absolute nullity and no rights shall vest in the persons responsible or be acquired by prescription.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

§1714. Sanctions for violations; exceptions

A. The attorney general shall, by injunctive or other relief, prevent the unlawful creation of encroachments without permit, or which by construction or continuing existence, create a hazard to the public interests. Any encroachment constructed or maintained without permit or lease, or abandoned shall be a nuisance and an obstruction and embarrassment to the public use and interest.

B. The attorney general, by court action, may compel or effect the removal or demolition of the encroachment at the expense of the parties responsible for their creation without any compensation and the parties responsible may be sentenced to pay all damages which have been occasioned by the creation or existence of the encroachment. The state may elect to keep the encroachment for the benefit of the public, but only upon reimbursement to the persons responsible for the cost of materials and labor required to construct the same. In no cases shall the state be compelled to suffer the existence of unlawful encroachments described herein. All remedies existing in law or equity in favor of landowners shall likewise be available to the state for enforcement of this Chapter.

C. In those cases where it is determined that an encroachment is constructed or maintained without lease or permit by reason of unintentional mistake or error, resulting in a failure to apply to the office, the persons responsible shall have thirty days from written or published notice to complete application to the office before appropriate action is instituted by the attorney general.

Added by Acts 1978, No. 645, §2, eff. July 13, 1978; Acts 2001, No. 919, §1.

Title 56

CHAPTER 2. WILDLIFE MANAGEMENT AREAS AND REFUGES

PART I. GENERAL PROVISIONS

SUBPART C. PARISH GAME AND FISH PRESERVES

§721. Authorization

Any parish may by formal resolution of its governing authority establish, maintain, and operate game and fish preserves in the parish.

PART II. PARTICULAR STATE GAME AND FISH PRESERVES AND SANCTUARIES

§801. Particular game and fish preserves and commissions recognized and continued

The following preserves and commissions created by the enumerated special statutes are continued in full force and effect within the Department of Wildlife and Fisheries:

(22) Spanish Lake State Game and Fish Preserve (Acts 1940, No. 261; Acts 1946, No. 226; Acts 1960, No. 462; Acts 1966, No. 455; Acts 1977, No. 222, §1; Acts 1997, No. 21, §2, repealed the commission).

§802. Responsibilities and duties

The department shall have the duty and responsibility for the management of resources, including water level control, aquatic weed control, and maintenance and repair of dams, control structures, and spillways within the territorial jurisdiction of each commission established in R.S. 56:801, provided that no local commission or authority is providing these services. The individual game and fish preserves and commissions or local governing authorities shall have the duty and responsibility for maintaining all support services within their territorial jurisdiction, including parks, picnic areas, and concessions.
Added by Acts 1982, No. 728, §1.

ACCESS

(SEE MAP - APPENDIX I)

Boat docks
One boat launch, capable of servicing approx. 4 boats at a time, with docks on either side
Parking is available for approximately 50 vehicles.

Piers
5 handicap accessible fishing piers.
(SEE MAP 5 – APPENDIX I)

State/Federal facilities
None

Reefs
78 Plastic trees, Lat 30.059626, Lon -91.864273, encompassing approximately 1 Acre. Marked by buoys at four corners or extent of reefs.
(SEE MAP – APPENDIX I)
(SEE PICTURE – APPENDIX III)

SHORELINE DEVELOPMENT

State/National Parks
State Historical Markers:
"Site of Camp Pratt"
From 1862-1863 Camp Pratt was official Confederate camp of conscription for South Louisiana. At one time as many as 3,000 conscripts were held. A small compound for Union prisoners of war also located at the camp.

"Spanish Lake"
First known as Lake Flamand for Jean B. Grevenberg, one of the earliest settlers in this area; called Lake Tasse by the French because of its round cup shape, later known as Spanish Lake for the Seguras, Romeros, Villatoros and others who lived by its shores.

Shoreline development by landowners
There is extensive residential housing between lake and Hwy 182 on the western **(SEE MAP, APPENDIX I)** edge of the lake. Shoreline residents have been utilizing the state water bottom for many years. Some have indicated the belief that if their property description says that they own land to Spanish Lake, they own to the shoreline as contained by the ring levee and set by the overflow structure. Some purchases of state property surrounding the lake have occurred. Three or four riparian property owners currently own property to the present water's edge of the lake.
The southern and eastern boundary of the ring levee is bordered by swamp lands that run to the edge of a golf course, Squirrel Run, built partially on state land. **(SEE MAP, APPENDIX I)** The clubhouse, driving range and two holes of the golf course presently occupy state land that is included in the GLO meander line of Spanish Lake as established in 1844 to 1847.

The northern edge of the lake is bordered by residential property between Bernard Drive and the lake to the exit from the ring levee onto Bernard Drive. Two property owners have purchased state lands to the lake's edge near the ring levee exit road.
Northwest of the ring levee, one riparian property owner has built crawfish ponds to the borrow canal adjacent to the levee. There has been no crawfishing activity in recent years.
(SEE MAP – APPENDIX I)

EVENTS / PROBLEMS

1. Soft sediment bottom, shallow water depth averaging 4.81ft.
2. Water highly fertile causing eutrophic conditions and dense plankton blooms
3. Large common carp population causes turbid water.
4. Nesting fish reproduction is at least negatively influenced if not totally eliminated.
5. Leaking drawdown structure
6. Small watershed (2.5-1 acres) with no alternative refill method

MANAGEMENT ISSUES

AQUATIC VEGETATION

In an 1897 report (Evermann, B.W. 1899. Report on investigations by the U.S. Fish Commission in Mississippi, Louisiana, and Texas, in 1897. Rept. U.S. Fish Comm. 24:287-310.) by the U. S. Fish Commission stated the water "…is full of *Nelumbo* (American Lotus), *Nuphar* (Spatterdock), *Nymphaea* (Water Lily), *Myriophyllum* (Milfoil), and other aquatic vegetation."
The current vegetation in the lake includes water hyacinth (*Eichhornia crassipes*), American lotus (*Nelumbo lutea*), maidencane (*Panicum hemitomon*), water primrose (*Ludwigia spp*.), duck potato (*Sagittaria* spp.), roseau (*Phragmites australis*), cattail (*Typha latifolia*), needlegrass (*Juncos roemerianus*), white water lily (*Nymphaea odorata*), smartweed (*Polygonum hydropiperoides*) and flatsedge (*Cyperus virens*).

Type map
Vegetation type mapping was conducted in 2000, 2001, 2003, 2004, 2005, 2006 and 2011.
(SEE TYPE MAP RESULTS IN APPENDIX II)

Biomass
No vegetative biomass studies have been conducted on Spanish Lake.

Treatment history by year available
Vegetation was treated in the early years of the lake. In 1961, Department correspondence revealed that alligator weed and water hyacinth infested the lake to the point of prohibiting fish sampling. Efforts were made at this time to rid the lake of these aquatic plants.

Apparently hydrilla was discovered in the state for the first time in Spanish Lake in the boat access channel. It is interesting that there is a retail plant nursery located adjacent to the lake at this point.

Spanish Lake was drained during the summer of 1990 for the purpose of lake renovation. During this dewatered period black willows (*Salix nigra)* infested the lake bottom. The willow infestation was treated with an aerial application of 2, 4-D on October 9, 15 and 16 of 1990.

The 2000 attempt to establish tape grass (*Vallisneria americana*) failed as no plants were observed in the lake. The cause for the failure was suspected to be due to erratic water levels and phytoplankton blooms caused by the leaking control structure and lack of rainfall.

The most current type map from 2011 showed the lake had no submerged aquatic vegetation. (SEE APPENDIX II) This was well below the recommended coverage of 15% - 30%.

The aquatic vegetation present in this lake as of 2013 is a growing patch of American lotus. It has been expanding in the shallow areas of the lake and will eventually provide some cover for fish. Other aquatics present in very minor amounts are a little water hyacinth around the landing with alligator weed, primrose and maidencane along the shoreline. The average annual turbidity level in Spanish Lake is 21.88 centimeters or 8.6 inches.

Statewide harvest regulations applied to all species until November, 1999. At that time black bass regulations were changed to its current status of a 16 to 21 inch slot limit with an 8 bass creel limit with no more than 2 allowed over 21 inches. This was done at the request of the Spanish Lake Game and Fish Preserve Commission and supported by the District Inland Fisheries Biologist based on initial findings from sampling results in 1997 and 1998. Growth rates were extremely high with one year old bass growing to 14 inches and genetic results showing high levels of Florida bass gene influence. It was hoped that with the tremendous forage base evident in the lake and the continued stocking of Florida bass fingerlings that fish up to 10 pounds would be produced. These fish were produced as evidenced by 9 and 10 pound individuals captured in winter gill net sampling. Unfortunately, the overall bass population declined significantly due to lack of recruitment and did not attract the bass anglers as hoped for by the commission.

TITLE 76
WILDLIFE AND FISHERIES
PART I. WILDLIFE AND FISHERIES COMMISSION AND AGENCIES THEREUNDER

Chapter 3. Particular Game and Fish Preserves and Commissions

329. Spanish Lake State Game and Fishing Preserve
General
1. Parking is restricted to designated parking areas.
2. The levee road will have one-way traffic with the entrance at the boat ramp and the exit on Bernard Drive.
3. ATV's (three wheelers and four wheelers) and motorbikes are prohibited on the levee.
4. Discharge of any firearms on the levees is prohibited.
5. Overnight camping is prohibited, except by special permit issued by Spanish Lake Game and Fishing Preserve Commission for supervised groups only.
6. The possession or use of commercial nets, including hoop nets, trammel nets, gill nets and fish seines, is prohibited, except by special permit issued by the Louisiana Department of Wildlife and Fisheries.
7. No trapping of furbearing animals, except by special permit issued by the Louisiana Department of Wildlife and Fisheries.
AUTHORITY NOTE: Promulgated in accordance with R.S. 56:6,
R.S. 56:721, et seq., R.S. 56:801 and R.S. 36:610.
HISTORICAL NOTE: Promulgated by the Department of Wildlife
and Fisheries, Wildlife and Fisheries Commission, LR 23:872 (July 1997), amended LR 30:1734 (August2004).

PART VII. FISH AND OTHER AQUATIC LIFE
Chapter 1. Freshwater Sports and Commercial Fishing

191. Black Bass Regulations, Spanish Lake
The harvest regulations for black bass (Micropterus spp.) on Spanish Lake, located between the cities of New Iberia and Lafayette, in Iberia and upper St. Martin Parishes, Louisiana is as follows:
1. Size limit: 16 inch - 21 inch slot. A 16-21 inch slot limit means that it is illegal to keep or possess a black bass whose maximum total length is between 16 inches and 21 inches, both measurements inclusive.
2. Daily take: 8 fish of which no more than two fish may exceed 21 inches maximum total length.

AUTHORITY NOTE: Promulgated in accordance with R.S. 56:6 (25)(a), R.S. 56:325(C) and R.S. 56:326.3.
HISTORICAL NOTE: Promulgated by the Department of Wildlife and Fisheries, Wildlife and Fisheries Commission, LR 25:2263 (November 1999).

Recreational
Black Bass (Largemouth & Spotted Bass) - 8 daily with a protected slot limit of 16-21 inches, No more than 2 fish may exceed 21 inches in maximum total length

A listing of Louisiana recreational fishing regulations can be found at:
http://www.wlf.louisiana.gov/regulations

Commercial
The 2013 commercial fishing regulations may be viewed at the link below:
http://www.wlf.louisiana.gov/fishing/regulations

The possession or use of commercial nets, including hoop nets, trammel nets, gill nets and fish seines, is prohibited, except by special permit issued by the Department of Wildlife and Fisheries according to the original rules and regulations adopted by the Louisiana Wildlife and Fisheries Commission in July, 1997, at the request of the Spanish Lake Game and Fish Preserve Commission. This regulation was adopted originally by the Spanish Lake Commission in 1996 as no commercial fishing allowed but was amended to its present reading at the urging of Mr. Bruce Davidson in a memorandum to Mr. Don Lee, Assistant Administrator, Inland Fisheries Division, Louisiana Department of Wildlife and Fisheries.

Commission Chairman Gordie White issued a "permit to catch trash fish with a gill net to Ronald Kennedy from November 15, 1972 to January 15, 1973". This permit was issued when fish and game preserve commissions had the authority to regulate fishing and access in preserves before they were abolished by legislative act and placed under the auspices of the Wildlife and Fisheries Commission with respect to regulatory authority.

There is no record of any other permits having been issued since that time or of any prerequisite restrictions to issuing a permit.

DRAWDOWN HISTORY

1963
The lake was drawn down to repair levees that had been built between 1954 and 1957.
In a letter dated October 31, 1967, Kenneth Lantz, Fisheries Biologist sent information concerning fish stocking records for Spanish Lake to Representative Patrick T. Caffery, Representative, Iberia Parish. Mr. Lantz outlined the stocking history showing that the lake was restocked with bluegill, crappie and bass in 1964 following complete fish eradication in 1963. He reported that, in the spring of 1965 and 1966, there were reports of limits of fish being caught in the lake but that these reports had declined in 1967. Mr. Lantz reported that lowering of water levels in the lake for levee repairs may have negatively influenced fishing success. He stated that no fisheries samples had been taken in the lake since restocking in 1964 and that he would request rotenone sampling for the lake in 1968 along with electrofishing samples in the spring of 1968 to check bass and crappie spawning success. Mr. Lantz reported that Mr. Thurman Morgan, Department of Public Works, advised him that the lake would be returned to pool stage in December, 1967, and had been delayed by problems with the pump.

1982
In September 1982, the levee was breached and a barge cover was used in an emergency procedure to prevent a total drawdown and loss of the lake. A controlled drawdown was implemented in May 1984 and levee repairs and lake renovation was finished in October 1985. The lake was refilled by pumping from the Joe Daigre canal assisted by heavy rains from Hurricane Juan.

The lake was restocked in January 1986 with 60,000 bluegill and redear sunfish. Florida strain largemouth bass were stocked along with channel catfish in 1986. Monitoring of the stocking success was accomplished by electrofishing on an annual basis beginning in March 1987. Carp and shad were the predominant species initially until 1990 when shad were absent from sampling results. The gamefish abundance declined continuously until they were totally absent in 1990. This was attributed to a large fish kill that occurred in late 1989 as a result of a hard freeze that caused the entire lake to freeze over for several days.

1996
To completely refurbish lake structure: ring levee, wind break levees, water control structure. Work was monitored by Simon J. Freyou & Associates, Inc. for a 2.5 million dollar project funded by state capital outlay funds. The record is not clear as to whether there was one or more than one capital outlay project. There is also mention of a federal project in the record but it is difficult to discern where in the project each fund was utilized. It could be that all of the funding sources were treated as one big project.

The ring levee was successfully repaired. The water control structure was not repaired. The wind break levees were repaired, but were again in poor condition by 2006 and almost disappeared for the most part by 2008.
Fish were greatly abundant for about 4 years following the drawdown. This included common carp. Since then, a combination of a leaking drawdown structure and a massive carp population has contributed to the tremendous decline in success of nesting game fish populations.

No record of changes in the regulations regarding fishing reflects that the fishing was legally closed but, the lake was essentially dry as heavy equipment worked on building breakwater levees in the interior of the lake.

<u>Depth below pool</u>
Bottom exposed in 98% of lake.

<u>Who operated structure</u>
DOTD

FISH KILLS / DISEASE HISTORY

1989 – The lake froze over causing a fish kill. The extent of the kill was not documented.
2005 – There was a kill, exclusively confined to common carp in April, 2005. The cause was the gram negative bacterium, *Flexibacter columnaris*. The kill was reported well after the fact. The size and scope of the kill were not documented.

CONTAMINANTS / POLLUTION

Water quality

Link **EPA National Assessment Data Base**

Mercury Level **DEQ - Mercury Data Summary by Site**

DEQ WATER QUALITY DATA FROM MERCURY SAMPLING

LINK TO DEQ WATER QUALITY AND MERCURY LEVELS

DATE	PARAMETER	DEPTH (m)	ppm	UNITS
1/28/1998	DISSOLVED OXYGEN	0.3	11.4	MG/L
1/28/1998	DISSOLVED OXYGEN	1	11.4	MG/L
1/28/1998	DISSOLVED OXYGEN	1.5	11.5	MG/L
1/28/1998	MERCURY DISSOLVED UG/L AS HG	1	< .050	UG/L AS HG
1/28/1998	MERCURY TOTAL BOT DEPOS (MG/KG AS HG DRY WGT)	0	0.096	
1/28/1998	PH FIELD	0.3	7.7	STANDARD
1/28/1998	PH FIELD	1	7.7	STANDARD
1/28/1998	PH FIELD	1.5	7.7	STANDARD
1/28/1998	SPECIFIC CONDUCTANCE FIELD (@25C)	0.3	143	UMHOS/CM
1/28/1998	SPECIFIC CONDUCTANCE FIELD (@25C)	1	142	UMHOS/CM
1/28/1998	SPECIFIC CONDUCTANCE FIELD (@25C)	1.5	143	UMHOS/CM
1/28/1998	TEMPERATURE WATER	0.3	13.1	DEG C
1/28/1998	TEMPERATURE WATER	1	13.1	DEG C
1/28/1998	TEMPERATURE WATER	1.5	13.1	DEG C
1/6/1999	DISSOLVED OXYGEN	0.3	14.1	MG/L
1/6/1999	DISSOLVED OXYGEN	1	13.9	MG/L
1/6/1999	DISSOLVED OXYGEN	1.5	11.7	MG/L
1/6/1999	MERCURY DISSOLVED UG/L AS HG	1	< .050	UG/L AS HG
1/6/1999	MERCURY TOTAL BOT DEPOS (MG/KG AS HG DRY WGT)	0	0.058	
1/6/1999	PH FIELD	0.3	8.1	STANDARD
1/6/1999	PH FIELD	1	8.1	STANDARD
1/6/1999	PH FIELD	1.5	7.8	STANDARD
1/6/1999	SPECIFIC CONDUCTANCE FIELD (@25C)	0.3	139	UMHOS/CM
1/6/1999	SPECIFIC CONDUCTANCE FIELD (@25C)	1	139	UMHOS/CM
1/6/1999	SPECIFIC CONDUCTANCE FIELD (@25C)	1.5	139	UMHOS/CM
1/6/1999	TEMPERATURE WATER	0.3	8.5	DEG C
1/6/1999	TEMPERATURE WATER	1	8.7	DEG C
1/6/1999	TEMPERATURE WATER	1.5	8.7	DEG C
1/6/2000	DISSOLVED OXYGEN	0.3	10	MG/L
1/6/2000	DISSOLVED OXYGEN	1	9.9	MG/L

1/6/2000	DISSOLVED OXYGEN	4	3.5	MG/L
1/6/2000	MERCURY DISSOLVED UG/L AS HG	1	< .050	UG/L AS HG
1/6/2000	MERCURY TOTAL BOT DEPOS (MG/KG AS HG DRY WGT)	0	0.083	
1/6/2000	PH FIELD	0.3	6.8	STANDARD
1/6/2000	PH FIELD	1	7	STANDARD
1/6/2000	PH FIELD	4	6.8	STANDARD
1/6/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	0.3	135	UMHOS/CM
1/6/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	1	135	UMHOS/CM
1/6/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	4	139	UMHOS/CM
1/6/2000	TEMPERATURE WATER	0.3	12.7	DEG C
1/6/2000	TEMPERATURE WATER	1	12.7	DEG C
1/6/2000	TEMPERATURE WATER	4	12.8	DEG C
12/20/2000	DISSOLVED OXYGEN	0.3	11.6	MG/L
12/20/2000	DISSOLVED OXYGEN	1	11.6	MG/L
12/20/2000	DISSOLVED OXYGEN	1.5	11.6	MG/L
12/20/2000	MERCURY TOTAL BOT DEPOS (MG/KG AS HG DRY WGT)	0	0.11	
12/20/2000	PH FIELD	0.3	8.1	STANDARD
12/20/2000	PH FIELD	1	7.9	STANDARD
12/20/2000	PH FIELD	1.5	7.9	STANDARD
12/20/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	0.3	227	UMHOS/CM
12/20/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	1	228	UMHOS/CM
12/20/2000	SPECIFIC CONDUCTANCE FIELD (@25C)	1.5	229	UMHOS/CM
12/20/2000	TEMPERATURE WATER	0.3	8.3	DEG C
12/20/2000	TEMPERATURE WATER	1	8.3	DEG C
12/20/2000	TEMPERATURE WATER	1.5	8.3	DEG C

DEQ INDIVIDUAL FISH SPECIES MERCURY VALUES

LINK TO DEQ INDIVIDUAL FISH SPECIES MERCURY LEVELS

Date	Species	Weight (g)	Length (cm)	Number	Value (ppm)
1/28/1998	LARGEMOUTH BASS	439.4	39.7	4	0.09
1/28/1998	LARGEMOUTH BASS	595.4	32	5	0.06
1/28/1998	LARGEMOUTH BASS	765.5	33.9	5	0.041
1/28/1998	LARGEMOUTH BASS	907.2	35	1	0.046
1/28/1998	WARMOUTH	189	19	9	0.132
1/28/1998	BIGMOUTH BUFFALO	402.6	28.6	5	0.042
1/28/1998	BIGMOUTH BUFFALO	491.4	30	6	0.05
1/28/1998	BIGMOUTH BUFFALO	538.7	31.2	7	0.058
1/28/1998	CARP	1190.7	42.3	4	0.037
1/28/1998	CARP	2069.6	48.8	2	0.054
1/28/1998	CARP	3841.4	61	2	0.103
1/28/1998	BOWFIN	1077.3	46.8	2	0.074
1/28/1998	BOWFIN	1530.9	50.7	1	0.05
1/6/1999	LARGEMOUTH BASS	555.7	32.7	5	0.014

1/6/1999	LARGEMOUTH BASS	727.6	35.7	3	0.029
1/6/1999	LARGEMOUTH BASS	963.9	38.2	4	0.031
1/6/1999	LARGEMOUTH BASS	1375	42.1	2	0.029
1/6/1999	WARMOUTH	230.8	20.2	7	0.031
1/6/1999	BIGMOUTH BUFFALO	765.5	35.8	4	0.023
1/6/1999	BOWFIN	850.5	46	3	0.033
1/6/1999	BOWFIN	1219.1	48.7	3	0.02
1/6/1999	BOWFIN	1474.2	52.3	3	0.024
1/6/2000	LARGEMOUTH BASS	419.6	30.3	5	0.031
1/6/2000	LARGEMOUTH BASS	680.4	35.3	5	0.029
1/6/2000	LARGEMOUTH BASS	997.9	39.9	5	0.092
1/6/2000	LARGEMOUTH BASS	1644.3	44.5	1	0.104
1/6/2000	WHITE CRAPPIE	283.5	26	3	0.016
1/6/2000	WHITE CRAPPIE	382.7	28.7	2	0.021
1/6/2000	WHITE CRAPPIE	793.8	35.2	2	0.028
1/6/2000	BIGMOUTH BUFFALO	714.4	35	5	0.037
1/6/2000	BOWFIN	1006.4	46.6	2	0.064
1/6/2000	BOWFIN	1304.1	51.3	2	0.088
1/6/2000	BOWFIN	1701	53.6	1	0.073
12/20/2000	LARGEMOUTH BASS	434.7	31.9	3	0.013
12/20/2000	LARGEMOUTH BASS	737.1	36.6	1	0.017
12/20/2000	LARGEMOUTH BASS	1006.4	39.6	2	0.016
12/20/2000	LARGEMOUTH BASS	1417.5	42.8	2	0.031
12/20/2000	LARGEMOUTH BASS	1530.9	47	1	0.161
12/20/2000	WHITE CRAPPIE	453.6	29.8	2	<0
12/20/2000	WHITE CRAPPIE	595.4	33.7	3	0.016
12/20/2000	WHITE CRAPPIE	680.4	35	1	0.019
12/20/2000	BLACK	198.5	23.8	9	0.006
12/20/2000	BIGMOUTH BUFFALO	759	35.8	3	0.012
12/20/2000	BOWFIN	680.4	45.2	2	0.132
12/20/2000	BOWFIN	1134	52.2	1	0.071
12/20/2000	BOWFIN	1984.5	59	1	0.178

BIOLOGICAL

Fish samples

An 1897 report (Evermann, B.W. 1899. Report on investigations by the U.S. Fish Commission in Mississippi, Louisiana, and Texas, in 1897. Rept. U.S. Fish Comm. 24:287-310.) stated that "The following fishes are said to occur in this lake (Lake Tasse): large-mouthed black bass, or "green trout," reaching a weight of 6 to 10 pounds; sac-a-lait, goggle-eye, bream, sunfish, barfish (*Roccus chrysops*), pike (*Lucius vermiculatus*), gar, grindle, goujon, blue cat, gaspergou, and buffalo."

History - 1960 to present

SPANISH LAKE FISH SAMPLING	
1963	Rotenone, 1 one acre set, unknown number of pickup days
1969	Rotenone, 1 one acre set, unknown number of pickup days
1972	Rotenone, 2 one acre sets, 1 day pickup
1973	Rotenone, 2 one acre sets, 1 day pickup
1975	Rotenone, 2 one acre sets, 1 day pickup
1988	Electrofishing 1 - 25 minute sample, 1 – 20 minute sample (August), DC, Prod pole, Daytime
1989	Electrofishing 3 - 15 minute samples (July), DC, Prod pole, Daytime
1991	Electrofishing 2 -15 minute samples (March), DC, Prod pole, Daytime Gill Netting – 6 samples each including – 100 ft. (4X25', 2.5, 3, 3.5 and 4 in. bar) mono gill
1991, 1992, 1993	No sampling
1994	Gill Netting – 2 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
1995, 1996	No sampling
1997	Gill Netting – 2 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
1998	Electrofishing 5 - 15 minute samples (December), DC, Prod pole, Nighttime Forage – 2 samples (December)
1999	Electrofishing 5 - 15 minute samples (December), DC, Prod pole, Nighttime Forage – 1 samples (December)
2000	No sampling
2001	Electrofishing 8 - 15 minute samples (Spring), DC, Prod pole, Daytime 8 – 15 minute samples (Fall), DC, Prod pole, Daytime Forage – 2 samples (Fall)
2002	Electrofishing 7 - 15 minute samples (Spring), DC, Prod pole, Daytime 5 – 15 minute samples (Fall), DC, Boom, Daytime 3 – 15 minute samples (Fall), DC, Prod pole, Daytime

	Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2003	Electrofishing 5 - 15 minute samples (Spring), DC, Prod pole, Daytime 6 – 15 minute samples (Fall), DC, Prod pole, Daytime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2004	Electrofishing 5 - 15 minute samples (Spring), DC, Prod pole, Daytime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2005	Electrofishing 6 - 15 minute samples (Fall), DC, Prod pole, Daytime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill Rotenone, 2 one acre sets, 2 day pickup
2006	Electrofishing 6 - 15 minute samples (Fall), DC, Prod pole, Daytime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2007	Electrofishing 7 - 15 minute samples (Spring), DC, Prod pole, Daytime 5 – 15 minute samples (Fall), DC, Prod pole, Daytime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill Rotenone, 2 one acre sets, 2 day pickup
2008	Electrofishing 7 - 15 minute samples (Spring), DC, Boom, Nighttime Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2008 - 2012	Electrofishing 6 – 15 minute samples (Spring/Fall), DC, Boom, Nighttime Electrofishing 2 – Forage samples Gill Netting – 3 samples each including: 300ft. (2.5, 3, 3.5, and 4 in. bar) mono gill
2013	Electrofishing 6 samples daytime Electrofishing 1 forage sample
2014	Electrofishing 6 samples daytime Electrofishing 1 forage sample

2015	Electrofishing 6 samples daytime Electrofishing 1 forage sample

Lake Bottom Investigation

AVERAGE WATER DEPTH	4.81 FT.
AVERAGE HARD BOTTOM DEPTH	6.72 FT.
AVERAGE SEDIMENT DEPTH	1.93 FT.
TOTAL SURFACE AREA	1240 A.
CURRENT WATER VOLUME	1,943,508,288 GAL.
CURRENT SEDIMENT VOLUME	3,923,304 YD^3
PROJECTED WATER VOLUME	2,715,254,823 GAL.

In 2003 an investigation into the lake bottom characteristics of Spanish Lake was initiated. Mitch Hoffpauir, Biologist 2, Wildlife and Fisheries, began making soundings of the water depth and the sediment depth in various locations in the lake. Pictures representing the results can be found at **PICTURE, APPENDIX III.** In April, 2007, a sample of the soft sediment from the lake bottom was sent to the Soil Testing and Plant Analysis Laboratory of the Department of Agronomy and Environmental Management at Louisiana State University. The lake soil was very low in phosphorous, very high in potassium, calcium and magnesium, optimum for sodium and pH, and high in sulfur, copper and zinc. The sample was classified as fine sandy loam.
A sample of the lake bottom was collected by Mitch Hoffpauir and placed in a 72 cm square box and leveled to a depth of 3.7 cm. Calculated volume was 19,180.8 cm^3. After 3 weeks of drying, the sediment volume was decreased by 31.7 percent to 13,107.2 cm^3 and measured 64 centimeters square with a depth of 3.2 cm. Six weeks into the testing period found the volume of the dried sediment to have been reduced by 71.8 percent measuring 51 cm X 53 cm X 2 cm with a volume of 5,406 cm^3. Pictures of this experiment are found at **PICTURE, APPENDIX III.**

The final texture of the completely dried sediment is best compared to a brick. Although no measurements were taken, when this sample was rehydrated, it showed no appreciable increase in volume although the surface did become slightly softer.

It is believed that it is the high volume of soft sediment is the root of fisheries management problems since impoundment. Removal of soft sediment would decrease the available nutrient load for plankton blooms and provide a more suitable substrate for submerged aquatic growth and gamefish spawning.
Suggested methods of removal are through the use of a suction dredge during a lake drawdown or by land based equipment subsequent to a drawdown and a drying period. In the past the sediment has been moved around in the lake but none of it has been removed since 1954. In that effort, 8,900 cubic yards were excavated, 14,000 cubic yards were used for levee embankment, and 249,000 cubic yards of peat moss were harvested.

Some information on suction dredging can be found at the following websites:
http://www.mudcat.com
http://www.mudcat.com/lake-restoration-pond-dredging/man-made-lake-12.htm

Once sediment removal is accomplished, if surface water is to be used to refill the lake there are options available for filtered pumping. Information can be found at the following websites:
http://www.rainforrent.com/solutions/Solutions.asp?Cat='PM'
http://www.rainforrent.com/products/filters.htm

Stocking History

The stocking history of Spanish Lake from 1997 – 2006 is found in the table below. It has not been stocked since 2006 due to habitat impairment (excessive turbidity and algal blooms).

YEAR	FLORIDA LARGEMOUTH	BLUEGILL	CHANNEL CATFISH	BLUE CATFISH
1997	70,296 fingerlings			
1998	54,033 fingerlings	128,700	22,760	24,547
1999	124,000 fry 99,252 fingerlings			
2000	129,716 fingerlings			
2001	125,266 fingerlings			
2002	125,898 fingerlings			
2003	135,552 fingerlings		20,142	
2004	125,676 fingerlings	126,797	4,505	6,744
2006	12,810 fingerlings			
Total	**1,002,499**	**255,497**	**47,407**	**78,698**

Species profile*

Gar Family, LEPISOSTEIDAE
Spotted gar, *Lepisosteus oculatus* (Winchell)
Shortnose gar, *Lepisosteus platostomus* Rafinesque

Bowfin Family, AMIIDAE
Bowfin, *Amia calva* Linnaeus

Freshwater Eel Family, ANGUILLIDAE
American eel, *Anguilla rostrata* (Lesueur)

Herring Family, CLUPEIDAE
Gizzard shad, *Dorosoma cepedianum* (Lesueur)
Threadfin shad, *Dorosoma petenense* (Günther)

Minnow Family, CYPRINIDAE
Common Carp, *Cyprinus carpio* Linnaeus

Sucker Family, CATOSTOMIDAE
Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)

Freshwater Catfish Family, ICTALURIDAE
Yellow bullhead, *Ameiurus natalis* (Lesueur)

Blue catfish, *Ictalurus furcatus* (Lesueur)
Channel catfish, *Ictalurus punctatus* (Rafinesque)
Tadpole madtom, *Noturus gyrinus* (Mitchill)

Livebearer Family, POECILIIDAE
Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE
Brook silverside, *Labidesthes sicculus* (Cope)

Temperate Bass Family, PERCICHTHYIDAE
Yellow bass, *Morone mississippiensis* Jordan and Eigenmann

Sunfish Family, CENTRARCHIDAE
Green sunfish, *Lepomis cyanellus* Rafinesque
Warmouth, *Lepomis gulosus* (Cuvier)
Bluegill, *Lepomis macrochirus* (Rafinesque)
Longear sunfish, *Lepomis megalotis* (Rafinesque)
Redear sunfish, *Lepomis microlophus* (Günther)
Northern largemouth bass, *Micropterus salmoides salmoides* (Lacépède)
White crappie, *Pomoxis annularis* Rafinesque
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Drum Family, SCIAENIDAE
Freshwater drum, *Aplodinotus grunniens* Rafinesque

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* Nomenclature and phylogenetic order follows Nelson, *et al*. 2004. Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 6th Edition. American Fisheries Society Special Publication 29. 386 pp. Exceptions are noted.

Genetics

A total of 1,002,499 Florida bass (FLMB) fingerlings were stocked into Spanish Lake from 1997 – 2006. Subsequent testing of the bass population for the Florida genome was conducted in 1998, 1999, 2001, 2004, 2006 and 2007. Incorporation of the Florida genome into the Spanish Lake bass population is considered to be successful. However, the stockings were discontinued in 2006. The reasoning was that the potential benefits of FLMB stocking cannot mitigate the effects of significant habitat impairment.

GENETICS					
Year	Number	Northern	Florida	Hybrid	Florida Influence
1998	59	79%	7%	14%	21%
1999	7	72%	14%	14%	28%
2001	51	55%	29%	16%	45%
2004	7	72%	14%	14%	28%

2006	27	45%	22%	33%	55%
2007	9	11%	45%	44%	89%

Threatened/endangered/exotic species

None

CREEL

Angler creel surveys conducted were one access point total sample creels on random days and times. Both boat anglers and bank anglers were included. The majority of anglers interviewed were bank anglers. Most bank anglers were targeting anything that bites.

Historic information

Year	No. Interview Days	Actual No. of Interviews	Actual No. Anglers Interviewed	Mean Trip Length	Average Distance Traveled
2000	32	406	806	3.04	13.67 mi.
2002	63	813	1622	3.04	14.19 mi.

Year	LMB Caught/Trip	LMB Harvest/Trip	LMB Caught/Hr.	LMB Harvest/Hr.	LMB lbs/Hr.
2000	0.78	0.46	0.23	0.13	0.15
2002	0.03	0.01	0.01	0.00	0.00

Year	Crappie Caught/Trip	Crappie Harvest/Trip	Crappie Caught/Hr.	Crappie Harvest/Hr.	Crappie lbs/Hr.
2000	0.17	0.17	0.06	0.06	0.03
2002	0.29	0.29	0.08	0.08	0.09

HYDROLOGICAL CHANGES

Archive maps indicate that the lake consisted of a much larger area than what was claimed by the U. S. General Land Office in surveys in 1844 – 1845. The GLO meander line that was surveyed by offset to avoid an impassable swamp gave a portion of the water bottom to Spanish land grant claims instead of including the low swamp between the Bayou Teche and the natural ridges of the old Mississippi meander.

The Keystone Canal was cut from Spanish Lake to Bayou Teche to run a sugar grinding mill in the early 1800's. The Joe Daigre canal was cut between Spanish Lake and Bayou Tortue sometime in the early 1900's. These canals effectively drained the standing water from the swamp and lowered the water level in the original lake.

The impoundment of the peat bog in 1954 was another major change to the original lake. The ring levee blocked watershed drainage that once existed from south of the lake. The railroad bed west of LA 182 blocks most drainage from the west.

The present 2.5/1 watershed ratio has no appreciable effect to the Spanish Lake water level. In effect, the Spanish Lake hydrology is rainfall in and evaporation out.

WATER USE

Hunting

Primarily duck hunting is taking place with permanent blinds being built and claimed by the builder. This has produced some conflict among users in some years.

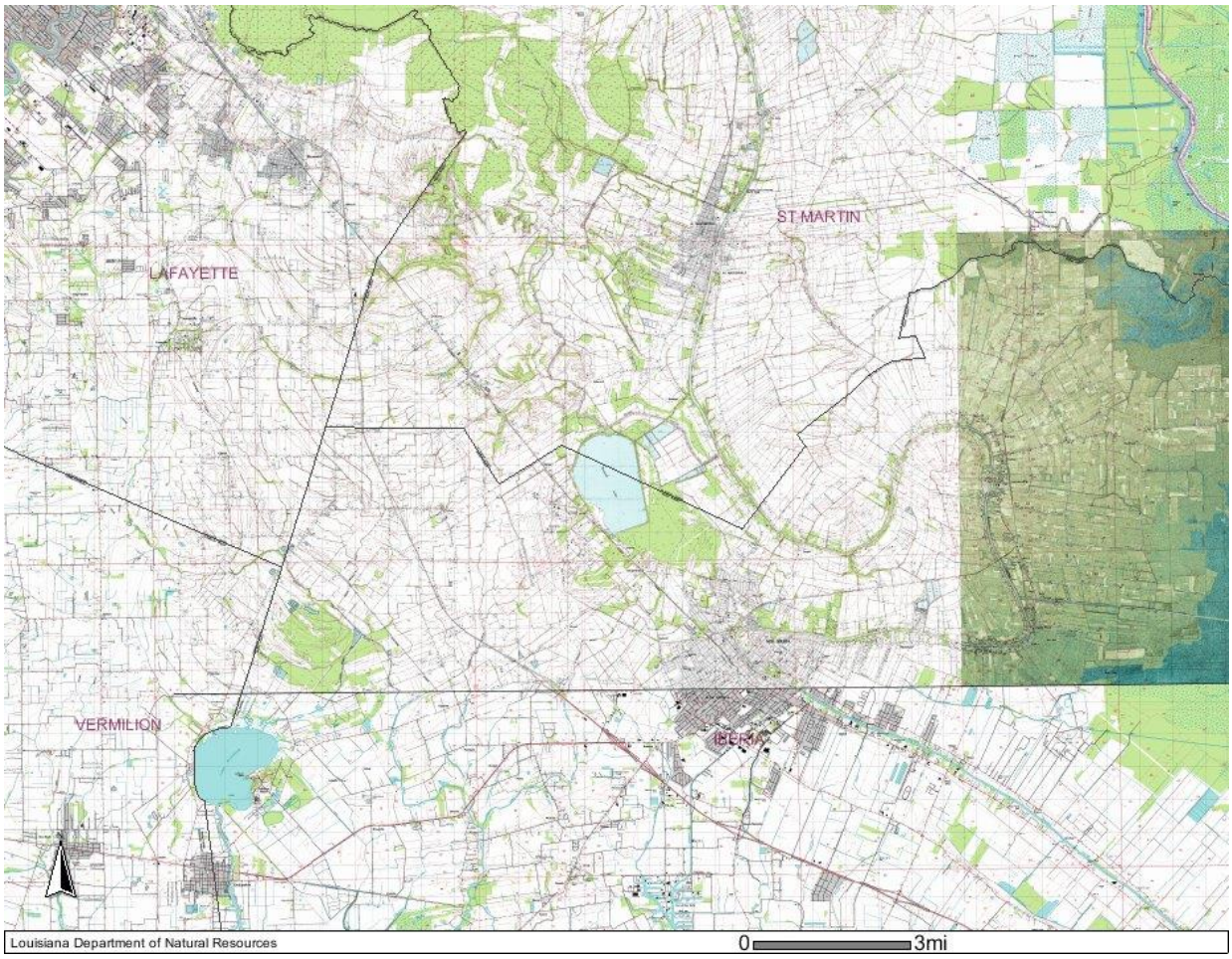
Fishing

Accessible to all anglers via boat or 4.5 mile rock-lined ring levee road with 5 handicap accessible fishing piers

APPENDIX I –MAPS

MAP

(CLICK HERE TO RETURN)

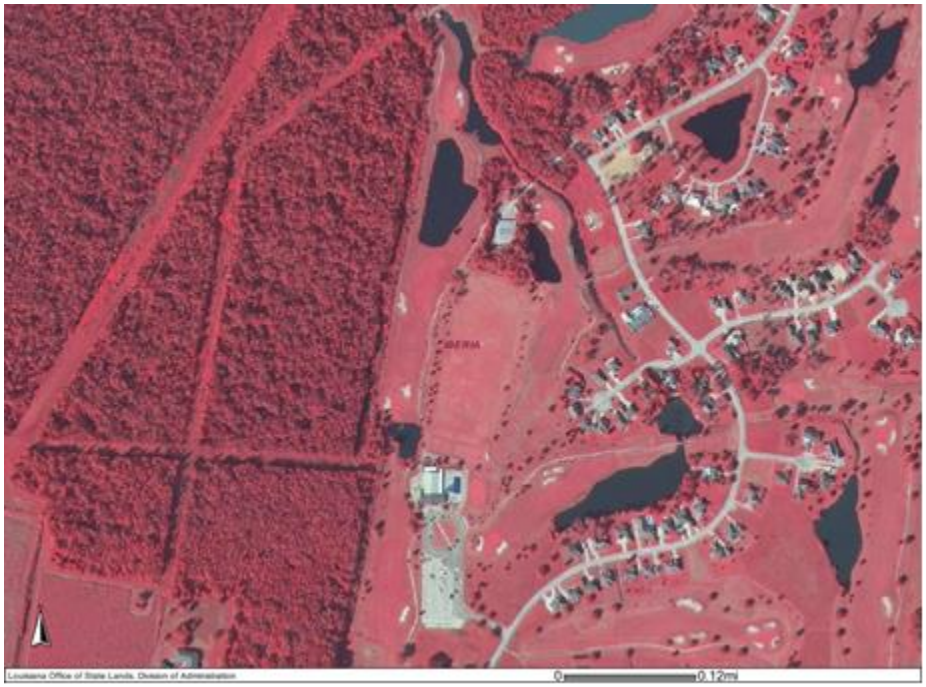


Map showing location of Spanish Lake and proximity to the cities of New Iberia, St. Martinville and Lafayette.

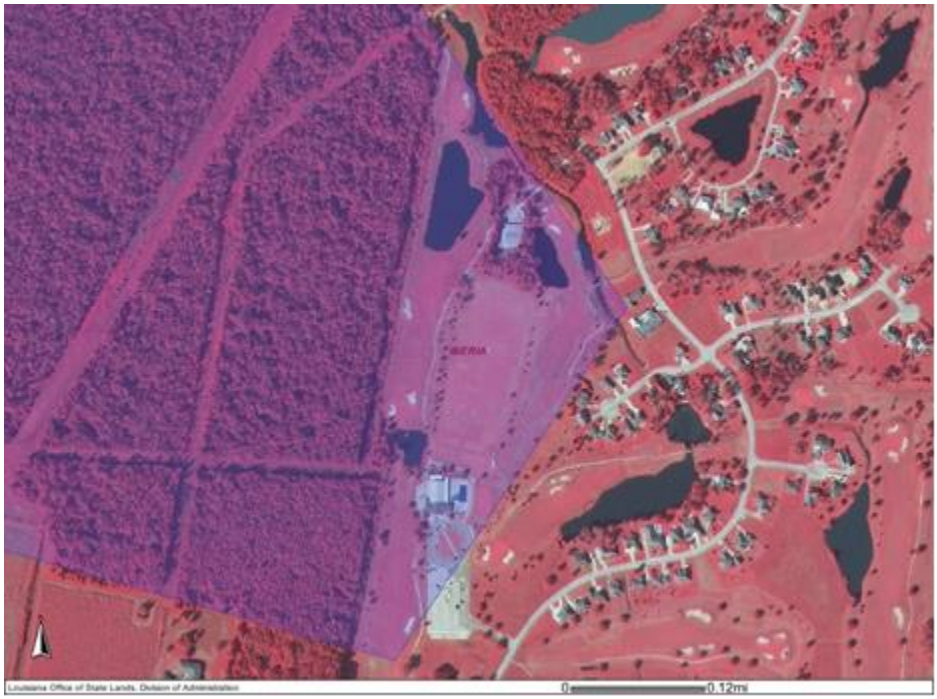
MAP – WESTERN SHORELINE DEVELOPMENT
(CLICK HERE TO RETURN)

NORTH WESTERN SHORELINE

MAP – SHORELINE DEVELOPMENT
(CLICK HERE TO RETURN)



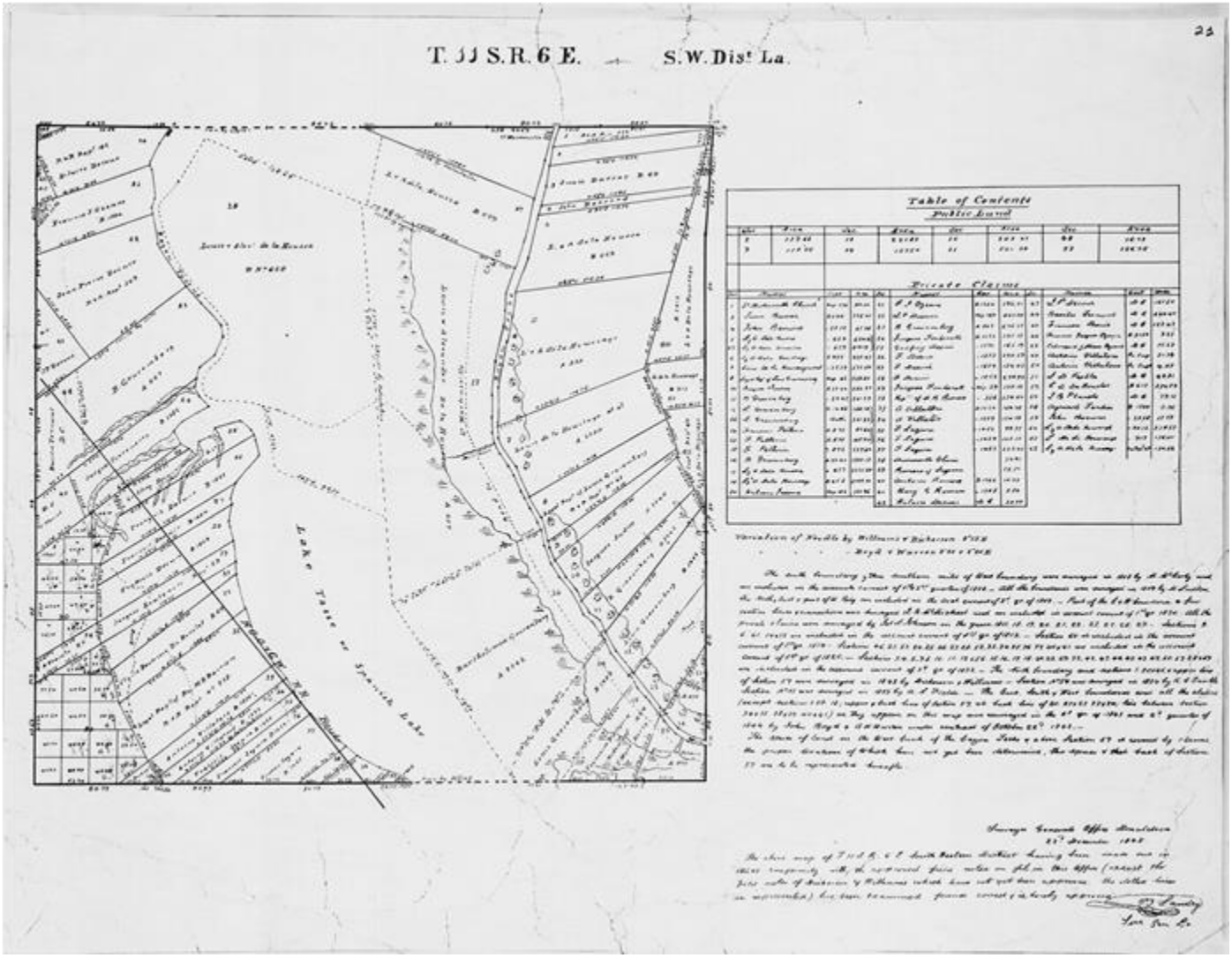
SQUIRREL RUN GOLF COURSE



STATE LAND OVER SQUIRREL RUN GOLF COURSE

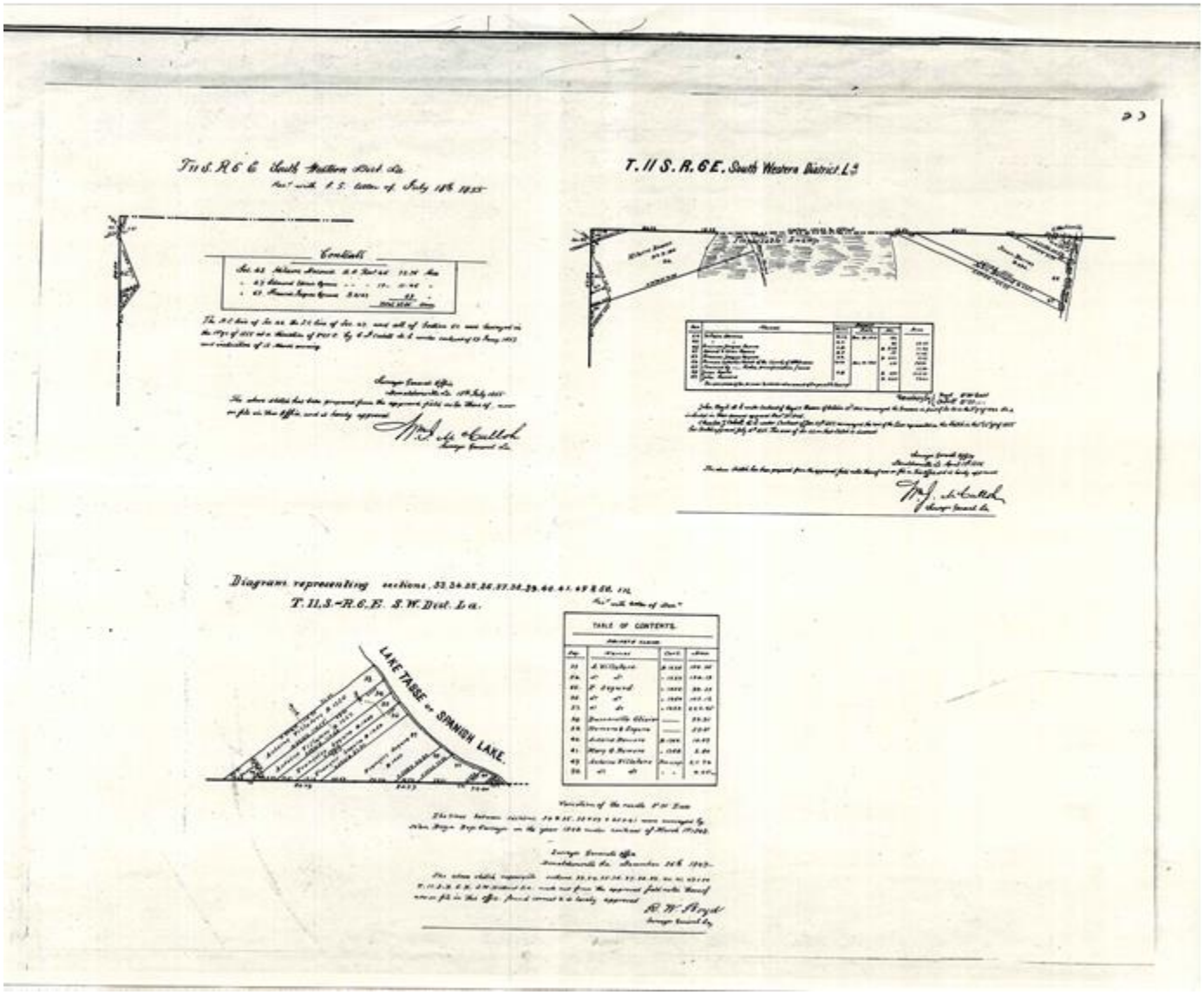
MAP 1 RETURN TO TOP

MAP OF SPANISH LAND GRANT CLAIMS AROUND ORIGINAL LAKE



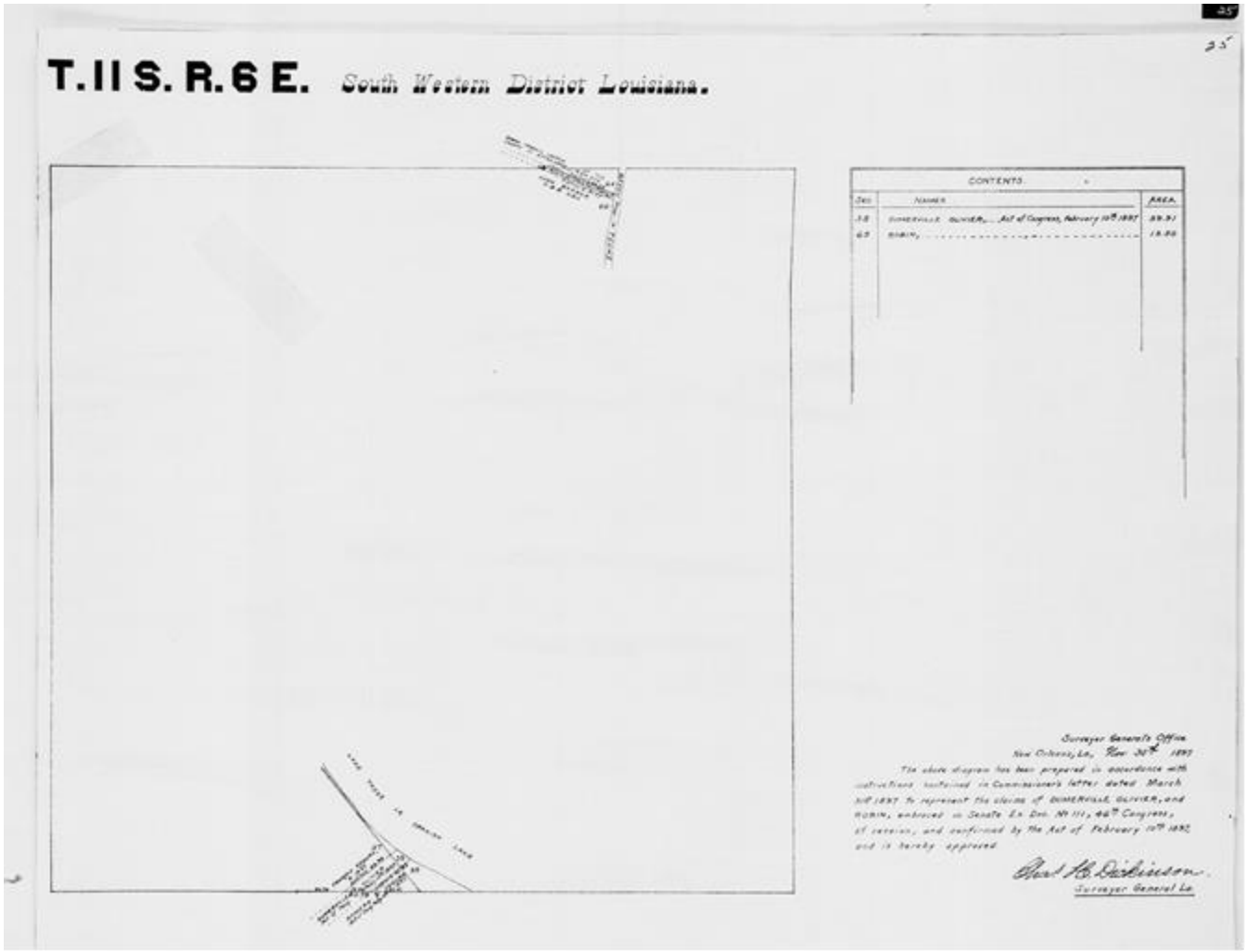
MAP 2 [RETURN TO TOP](#)

CORRECTIONS TO ORIGINAL LAND GRANT SURVEY



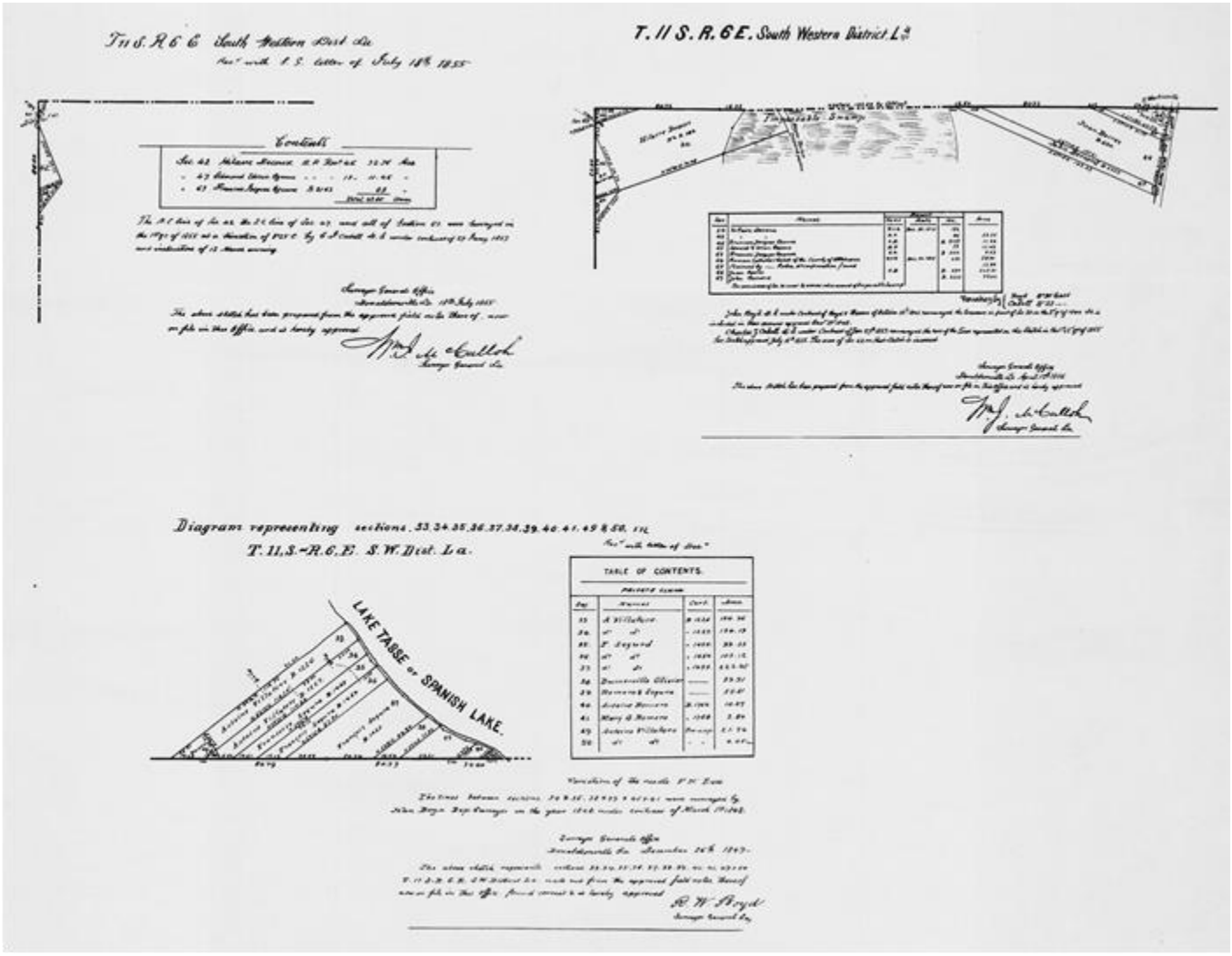
MAP 3 **RETURN TO TOP**

CORRECTIONS TO ORIGINAL LAND GRANT SURVEY



MAP 4 [RETURN TO TOP](#)

CORRECTIONS TO ORIGINAL LAND GRANT SURVEY



MAP 5

SPANISH LAKE FISHING PIERS AND BOAT RAMP

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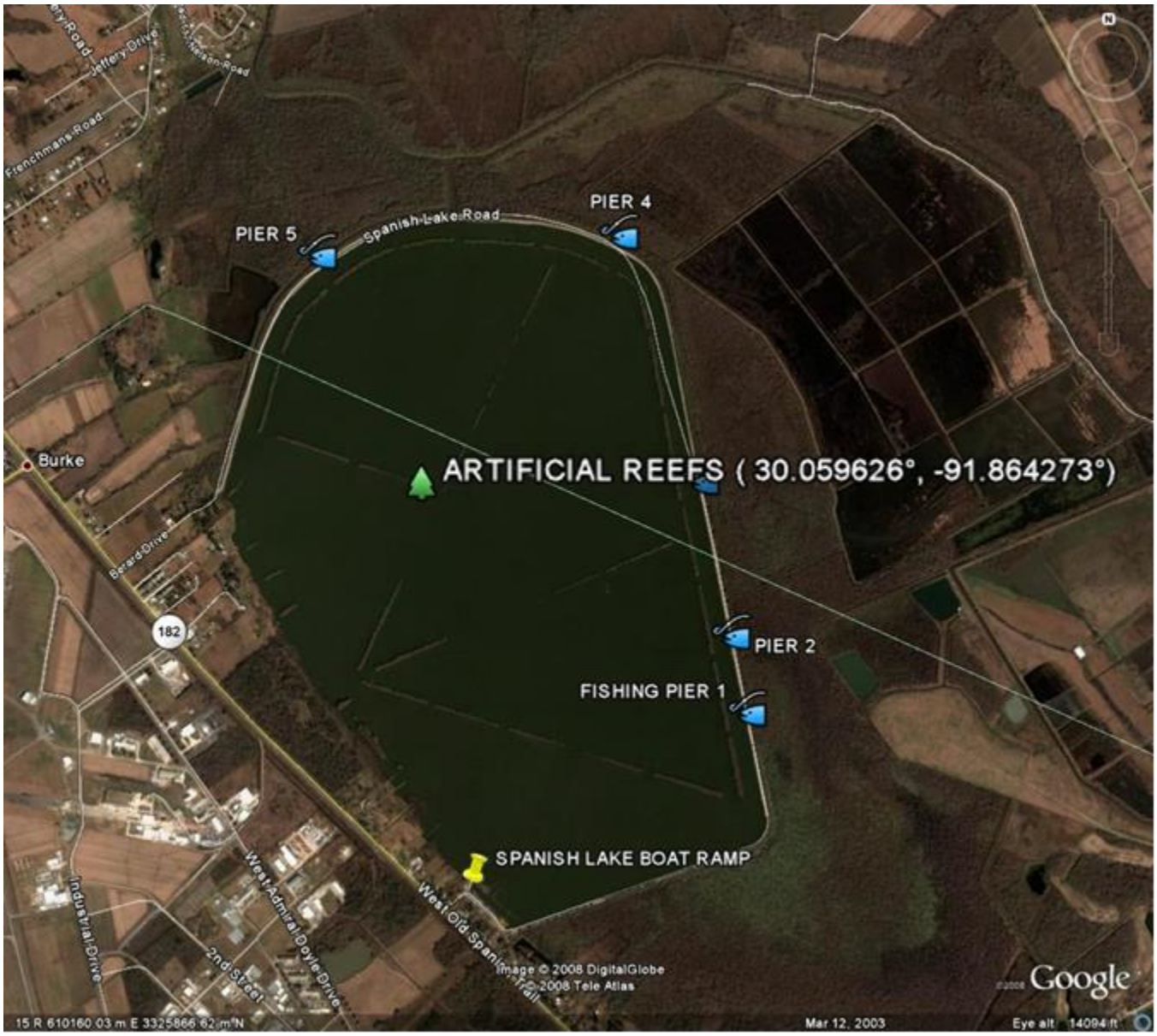
MAP 6
LOCATION OF SPANISH LAKE ARTIFICIAL REEF STRUCTURES
(CLICK HERE TO RETURN)

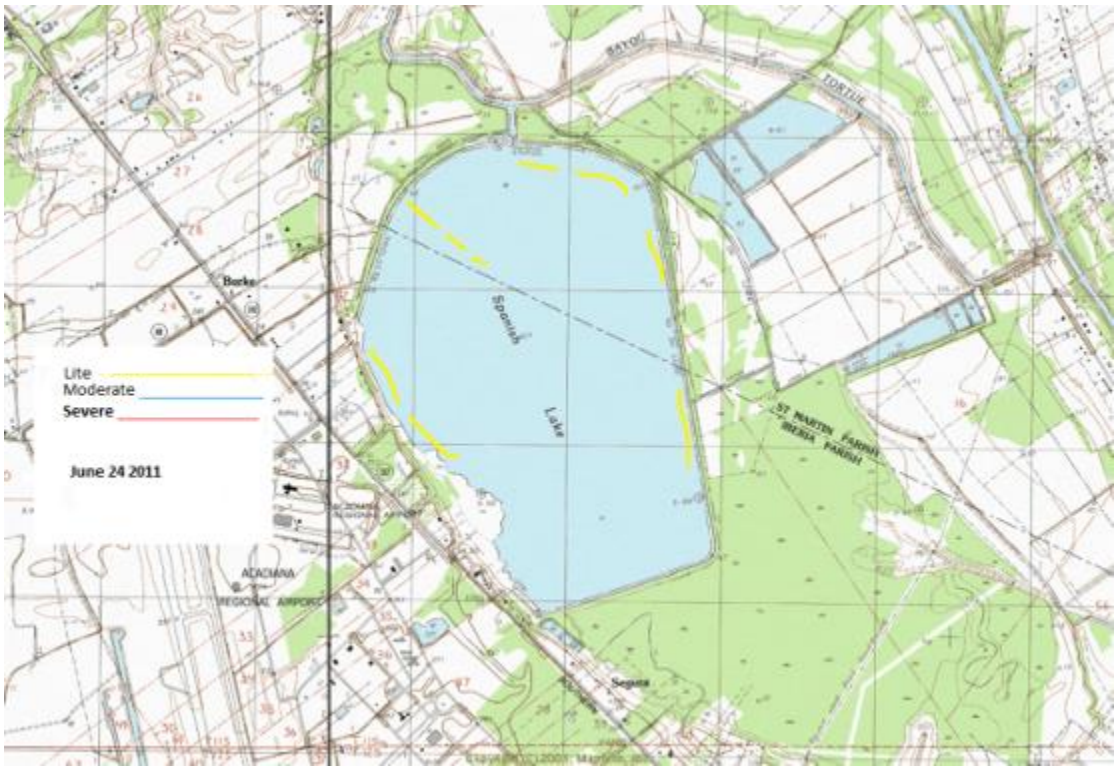


APPENDIX II – TYPEMAP
(Click here to return)

A vegetative type map of Spanish Lake was conducted in June of 2011. Small amounts of vegetation exist in the lake as shown in the type map description. The spray crews did not have to apply herbicide on the lake in 2011.

Spanish Lake Vegetation Survey 6-24-2011 - Martin Plonsky
A survey of aquatic vegetation found in Spanish Lake resulted in the conclusion that there is little to no aquatic vegetation in the lake. Very thin amounts of water hyacinth were observed in the vicinity of the boat launch and on the shoreline of the breakwater islands on the eastern side of the lake. The lake water was saturated ("bloom") condition with planktonic algae and water pH was above 8.0. Small bunches of iris were seen growing along the eastern bank of the lake. Average water depth was 2 feet. The vegetation survey was conducted on the same day we investigated the report of a fish kill at the lake. No dead fish were observed.

Date	Temp	SpCond	Salinity	Depth	pH	Turbidity+	% odo	DO	Chlorophyl
6/24/11	28.18	0.155	0.07	-0.121	9.09	69.5	129.70	10.12	55.8
6/24/11	27.81	0.155	0.07	0.327	8.75	79.8	109.70	8.61	56.0

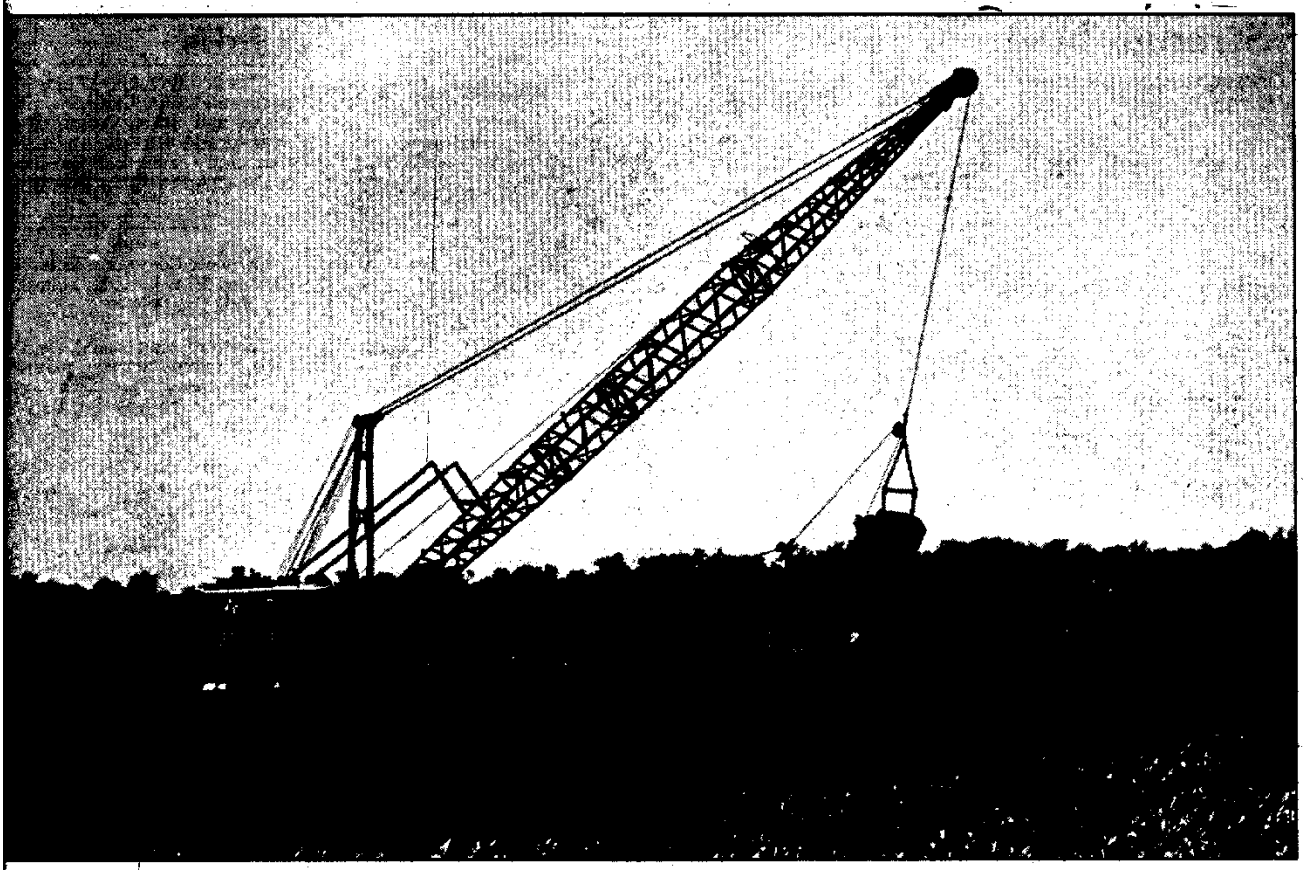


APPENDIX III

PICTURE 1

(CLICK HERE TO RETURN)

Spanish L - media coverage 8



THE ADVERTISER/Timothy Beacham

A dragline piles dirt onto an interior levee at Spanish Lake located in Iberia Parish. The interior levees are being constructed as breakwater levees in the middle of the lake which will lessen the effect of wave erosion on the main levee surrounding the lake.

Lake restoration ahead of schedule

y Wayne LeJeune
cadiana Correspondent

CADE — Spanish Lake will be stored to its former glory in bout three months but deciding ow the lake will be used might ke longer.

Project engineer Simon Freyou id the restoration project is head of schedule, while Iberia arish President Will Langlinais id the commission he formed to sign a usage plan for the lake has spended its meeting schedule.

"All of the embankment work the exterior levee is finished," reyou said. "The limestone surcing on the road has been put wn and we're waiting until the d of the project to do a final ssing on it.

"Basically, the commissioners want final say on what happens and I'm not sure Iberia Parish wants to assume that responsibility and the financial aspects that go along with it."

Will Langlinais

"The work on the interior levee is about 60 percent complete," he said.

The exterior levee completely surrounds the lake and was severely eroded prior to the project. The limestone road runs along the top of the main levee.

The interior levees are being constructed as breakwater levees in the middle of the lake which will lessen the effect of wave erosion on the main levee.

The Spanish Lake Game and Fish Commission was formed earlier this year to decide how the lake will be used after the project is completed and the lake refilled. The commission held several meetings trying to devise a set of rules and regulations but abruptly stopped meeting this summer.

Langlinais said the commissioners aren't sure how much authority they have in deciding laws governing the lake.

"We're seeking a legal opinion from the District Attorney's Office," Langlinais said. "Basically, the commissioners want final say on what happens and I'm not sure Iberia Parish wants to assume that responsibility and the financial aspects that go along with it."

The state Legislature funded the current $3 million restoration project. Langlinais is concerned that legislators will cut future funding for lake maintenance, if the parish takes full control of the lake from the Department of Wildlife and Fisheries.

PICTURE 2
(CLICK HERE TO RETURN)

Acadiana

Lake regulations up for approval by state

By Wayne LeJeune
Acadiana Correspondent

CADE — Spanish Lake will soon be restored to its former glory but will be governed by a new set of rules, including a fee for entering.

The $3.2 million restoration project should be completed in the next 30 days and the Spanish Lake Game and Fish Commission has submitted a Rules and Regulations proposal to the State Department of Wildlife and Fisheries for approval.

The proposed policy contains a number of prohibitions that run counter to how the lake was used in the past. The greatest change is that hunting will not be permitted on the lake.

More to the point (according to the new guidelines): "Discharge of firearms on the levee and surrounding state property is prohibited" and "no trapping of animals."

Also, fishermen will face a tougher set of regulations that include:

hours for boat and bank fishing will begin when gates open (approximately at dawn) and end at dusk;

night fishing is prohibited, and

trout lines, cast nets, seining and crabbing will not be allowed.

The policy will allow the use of hoop nets to remove "trash fish" from the lake during special sessions to be determined by the DWF.

Stricter regulations will also apply to other recreational activities, such as:

jet and water skiing is not permitted on the lake;

"We've had problems with drug dealing and vandalism and clearing that up is our number one priority."

Greta Green

ATVs (all-terrain vehicles - three- and four-wheelers) and motorbikes are not allowed on the levee road, and no camping.

Despite the proposed restrictions, commission Co-chair Greta Green said, "The commissioners are dedicated and committed to restoring the lake and making it a beautiful recreation area."

The project is expected to be completed under budget and project engineer Simon Freyou is hoping to have about $250,000 left to build a 600-foot bulkhead adjacent to the bank at the boat landing to prevent erosion of that bank.

Any additional leftover funds could possibly be used to build picnic tables, two observation towers and other amenities.

A group of "concerned property owners" who own land around the lake also has submitted a list of suggestions that include the installation of security lighting and "No Parking/Tow Away" signs on private property.

"We've had problems with drug dealing and vandalism and clearing that up is our number one priority," Green said. "It doesn't do us any good to spend all this money restoring the lake if we can't keep it the way it should be kept."

According to Green, the DWF will review the proposed regulations and if approved the plan will be sent back to the commission, with any changes, and ratified.

The proposal also calls for "a fee to be charged upon entering Spanish Lake," although the amount to be charged has not been determined.

Project engineers expect to begin refilling the lake in late March. Freyou said it should take four to six weeks to completely refill the lake and the DWF will begin restocking the lake with game fish.

PICTURE 3
(CLICK HERE TO RETURN)


05-2004


02-2007


05-2004

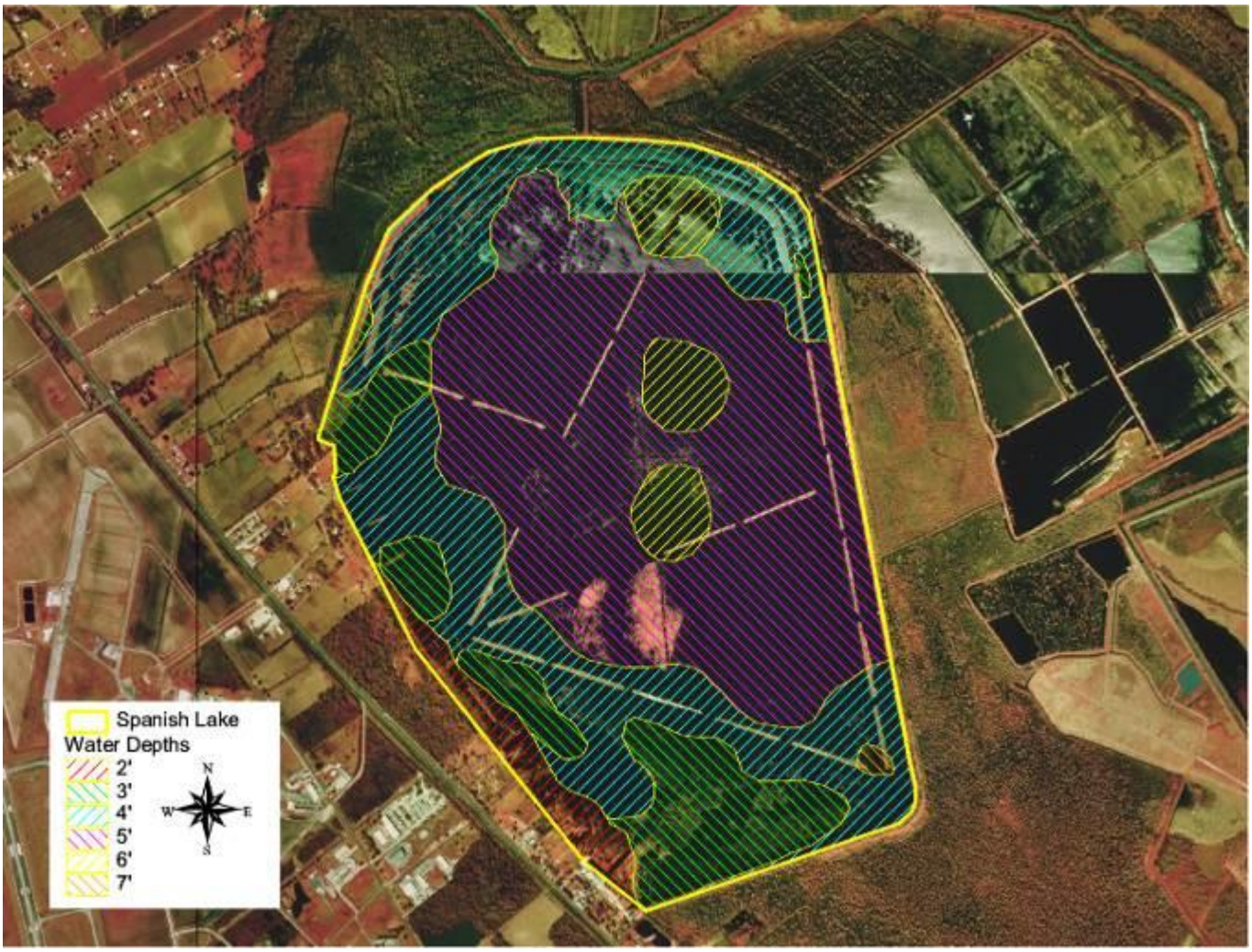
PICTURE 4
ARTIFICIAL REEFS
(CLICK HERE TO RETURN)

SHALLOW WATER ARTIFICIAL REEF

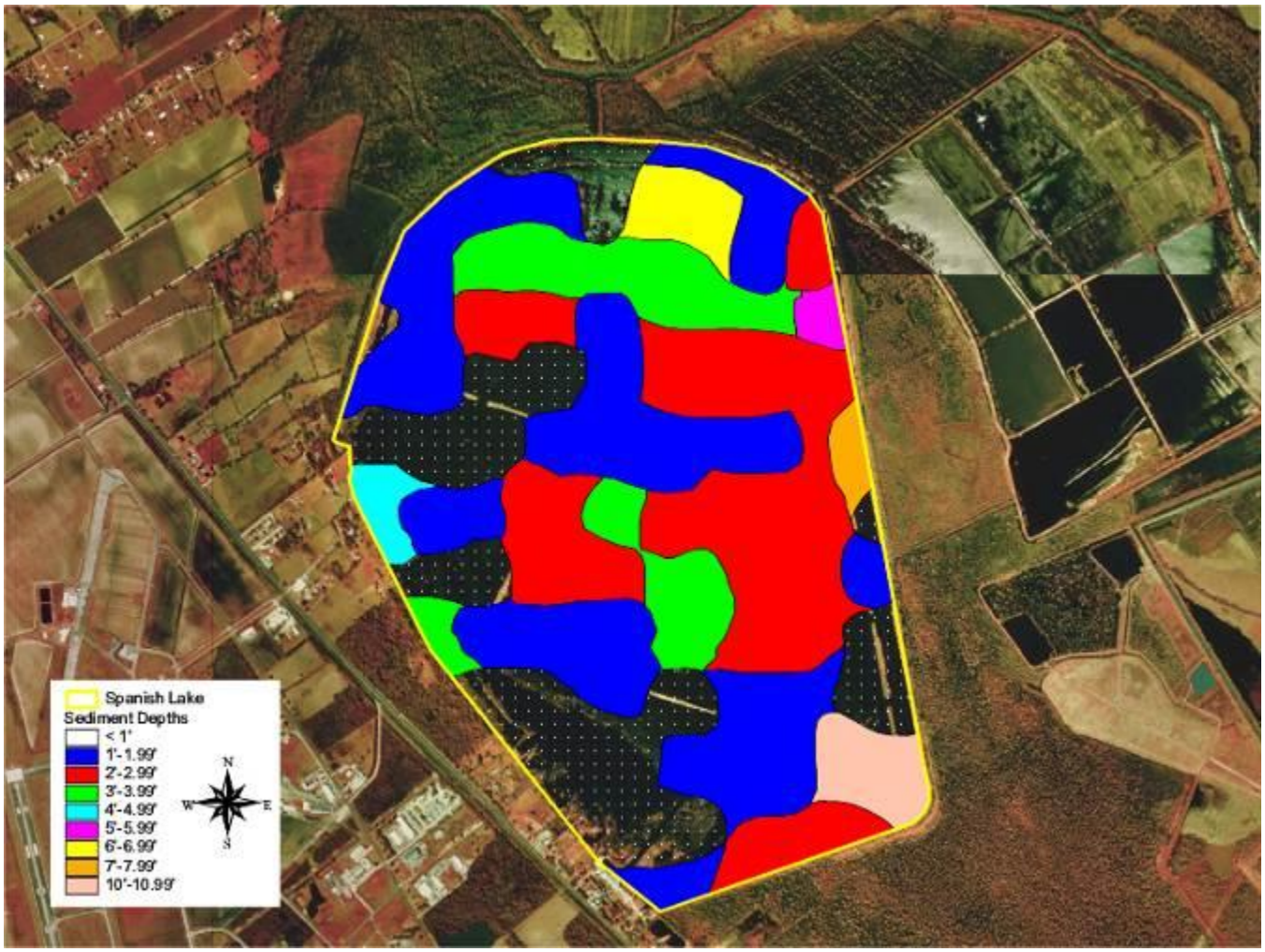
BUOY MARKING ARTIFICIAL REEFS

PICTURE 5
(CLICK HERE TO RETURN)

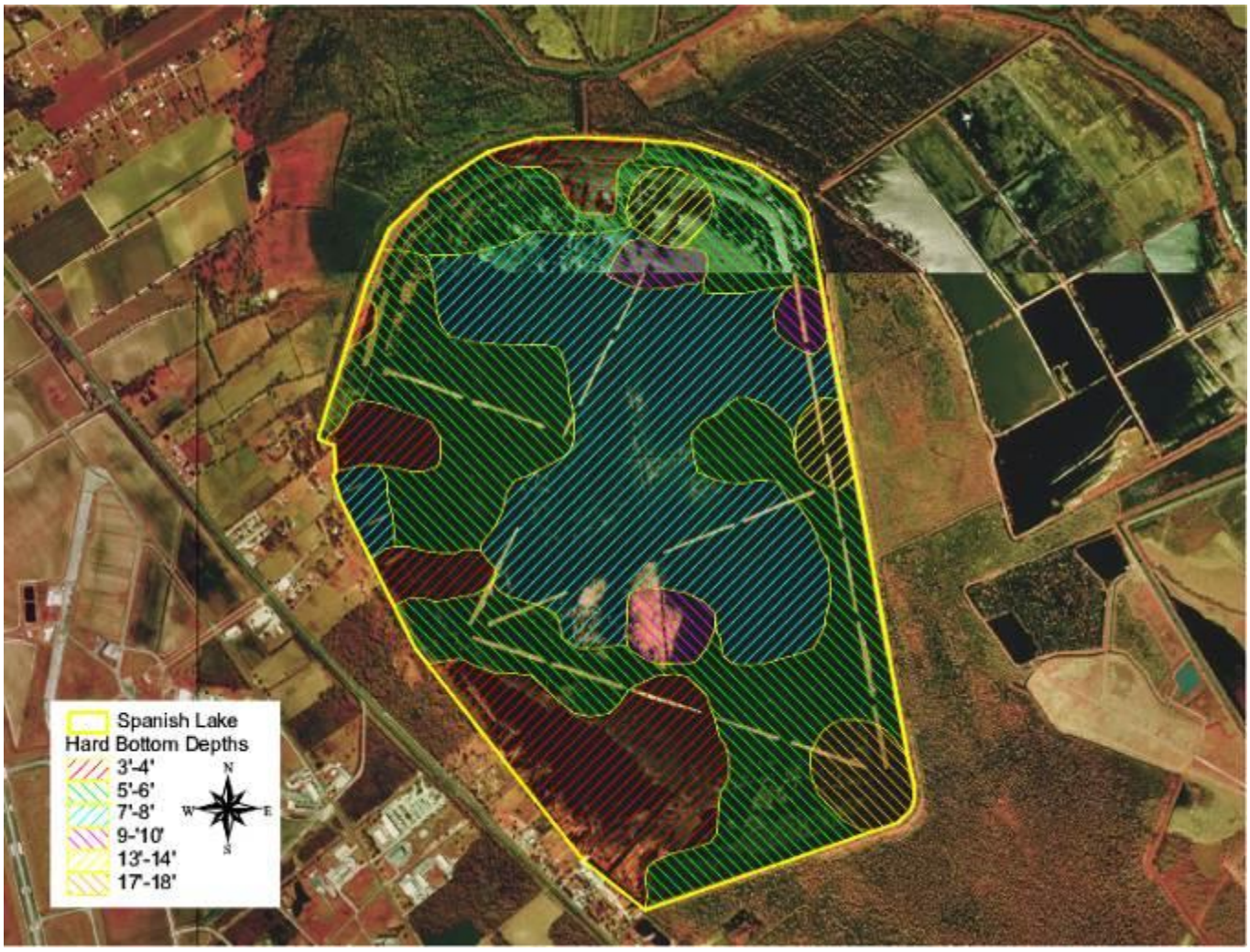
SPANISH LAKE WATER DEPTHS



SPANISH LAKE SEDIMENT DEPTHS



SPANISH LAKE HARD BOTTOM DEPTH BELOW SEDIMENT



PICTURE 6
(CLICK HERE TO RETURN)


5-15-07
5406 cm³
LENGTH